May 2020

STATE CLEARINGHOUSE NUMBER 2019070377 | FINAL EIR

THE WESTPORT MIXED-USE PROJECT FINAL EIR

for the City of Cupertino

CITY OF CUPERTINO EST. 1955

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CUPERTINO

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PLACEWORKS

Prepared By:

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November 6, 2019

State Clearinghouse Number 2019070377 | PUBLIC REVIEW DRAFT EIR

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Sources

In addition to the appendices listed above, all documents cited in this report and used in its preparation are hereby incorporated by reference into this Environmental Impact Report. Copies of documents referenced herein are available for review at the City of Cupertino Community Development Department at 10300 Torre Avenue, Cupertino, California 95014.

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1. Introduction

Pursuant to Section 21080(d) of the California Environmental Quality Act (CEQA)[1] and Section 15378[a] of the CEQA Guidelines,[2] The Westport Mixed-Use Project is considered a "project" subject to environmental review because its approval is "an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment." This Draft Environmental Impact Report (Draft EIR) provides an assessment of the potential environmental consequences of approval, construction and operation of The Westport Mixed-Use project, herein referred to as "proposed project." This Draft EIR also identifies mitigation measures and alternatives to the proposed project that would avoid or reduce any of the significant effect of the project. This Draft EIR compares the development of the proposed project with the existing baseline condition, described in detail in each section of Chapter 4.0, Environmental Analysis. The City of Cupertino (City) is the lead agency for the proposed project. This assessment is intended to inform the City's decision-makers, responsible and trustee agencies, and the public-at-large of the nature of the proposed project and its effect on the environment.

1.1 PROPOSED PROJECT

The 8.1-acre project site is identified as Priority Housing Element Site A3 (The Oaks Shopping Center) in the City of Cupertino General Plan (Community Vision 2015-2040). The site is currently developed with a one-story shopping center (The Oaks Shopping Center) consisting of five buildings occupied with retail stores, restaurants, and offices, which were built between 1973 and 1976. Existing development on the site consists of an approximately 71,250-square-foot shopping center that is currently 85 percent occupied. The project site has 201,831 square feet of paved area, which includes associated parking, sidewalks, patios, and driveways, in addition to 45,486 square feet of native and non-native landscaping.

The proposed project would demolish the existing buildings onsite and construct 18 new buildings, that would have 242 residential units and 20,000 square feet of retail space, as well as below and at-grade parking, and associated landscape and hardscape areas. The proposed residential component would consist of three rowhouse buildings, 13 townhouse buildings (attached homes), and two mixed-use (residential and retail) buildings, including market-rate units and senior housing. The proposed retail component would be located on the ground level of the two mixed-use residential buildings. Residential-Retail Building 1 would have approximately 17,600 square feet of retail space located at the corner of Stevens Creek Boulevard and Mary Avenue. Residential-Retail Building 2 would have approximately 2,400 square feet of retail space on the ground level fronting Stevens Creek Boulevard. The proposed project would include one access point off Stevens Creek Boulevard and three additional access points off Mary

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[1] The California Environmental Quality Act is found at California Public Resources Code, Division 13, Sections 21000-21177.

[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387.

Avenue. Below-grade parking would be located under Retail-Residential Building 1 and accessed from the central access point on Mary Avenue. Off-site improvements include the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. The proposed project is described in more detail in Chapter 3, Project Description, of this Draft EIR.

1.2 EIR SCOPE

This document is a project-level EIR that identifies and analyzes potential significant environmental impacts of the proposed project. As a project-level EIR, the environmental analysis describes the physical changes in the environment that would result from the development of the proposed project. This project-level EIR examines the short-term impacts (project construction) and long-term impacts (project operation) that would occur as a result of project approval. Prior to preparing this Draft EIR, the City of Cupertino conducted a scoping process. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4.0, Environmental Evaluation.

1.3 ENVIRONMENTAL REVIEW PROCESS

1.3.1 DRAFT EIR

An Initial Study was prepared for the proposed project in July 2019. Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the City of Cupertino determined that the proposed project could result in potentially significant environmental impacts, and that an EIR would be required. In compliance with CEQA Section 21080.4, the City circulated the Initial Study and Notice of Preparation (NOP) of an EIR for the proposed project to the Office of Planning and Research (OPR) State Clearinghouse and to responsible and trustee agencies on Thursday, July 11, 2019 for a 30-day review period. OPR posted the NOP with a start date of Friday, July 12, 2019 and an end date of Monday, August 12, 2019 to submit comments on the scope and content of the environmental information in the EIR. The NOP was filed with the County Clerk pursuant to CEQA Guidelines Section 15082(a). While not required under CEQA, a public Scoping Meeting was held on Thursday, July 18, 2019 at 6:30 p.m. at the Cupertino Community Hall (10350 Torre Avenue). A notice of the Scoping Meeting was circulated consistent with CEQA Guidelines Section 15082(c)(2) and mailed to all addresses within a 3,000-foot radius of the project site. The NOP and scoping process solicited comments from interested parties regarding the scope of the Draft EIR. Appendix A of this Draft EIR contains the Initial Study and Appendix B includes the NOP as well as the comments received by the City in response to the NOP.

This Draft EIR will be available for public review for a 45-day comment period. During the comment period, the public is invited to submit written or e-mail comments on the Draft EIR or the proposed project to the City of Cupertino Community Development Department. Written comments should be submitted to:

Gian Martire, Senior Planner
City of Cupertino
10300 Torre Avenue
Cupertino, CA 95014
Phone: (408) 777-3319
Email: GianM@cupertino.org

1.3.2 FINAL EIR

Following the conclusion of the 45-day public review period for the Draft EIR, the City of Cupertino will review all comments received and prepare written responses to comments on environmental issues. A Final EIR will then be prepared, which contains all the comments received, responses to comments raising environmental issues, and any changes to the Draft EIR (if necessary). Responses to comments submitted on the Draft EIR by public agencies will be provided to those agencies at least 10 days prior to certification of the EIR. All agencies, organizations, and individuals who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing before the City Council. The Final EIR will then be presented to the City Council for certification. Public input is encouraged at all public hearings before the City.

Prior to the approval of the proposed project, the City Council must certify that the Final EIR was completed in compliance with CEQA. The City Council will also make findings regarding each significant environmental effect of the proposed project as identified in the Final EIR. If the City Council certifies the Final EIR, it may then consider whether to approve The Westport Mixed-Use Project. If the proposed project is approved, the City Council will adopt and make conditions of project approval all feasible mitigation measures identified in the EIR.

In some cases, the City Council may find that certain mitigation measures are within the responsibility and jurisdiction of other public agencies, and not the City of Cupertino, to implement, or that no feasible mitigation measures have been identified for a significant impact. In that case, the City Council may nonetheless determine that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

1.3.3 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that the lead agency adopt a mitigation monitoring or reporting program (MMRP) for any project for which it has adopted mitigation measures. The MMRP is intended to ensure compliance with the adopted mitigation measures during the project implementation. The MMRP for the proposed project will be completed as part of the environmental review process.

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2. *Executive Summary*

This chapter presents an overview of the proposed Westport Mixed-Use Project, referred to herein as the "proposed project." This executive summary also provides a list of each significant impact with proposed mitigation measures (see Table 2-2), provides a summary of the alternatives to the proposed project, as well as issues to be resolved, areas of controversy, and conclusions of the analysis contained in Chapters 4.1 through 4.9 of this Draft Environmental Impact Report (Draft EIR). For a complete description of the proposed project and the alternatives to the proposed project, see Chapter 3, Project Description, and Chapter 5, Alternatives to the Proposed Project, of this Draft EIR, respectively.

This Draft EIR addresses the significant environmental effects associated with implementation of the proposed project. The California Environmental Quality Act (CEQA) requires that public agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public and public agency decision-makers with an analysis of the potential environmental consequences of the proposed project to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA[1] and the CEQA Guidelines[2] to determine whether approval of the proposed project could have a significant effect on the environment (i.e., significant impact). The City of Cupertino, as the lead agency, has exercised its independent judgment by reviewing and revising, as necessary, all drafts, technical studies, and reports submitted in preparation of this EIR, including reliance on applicable City technical personnel and review of all technical subconsultant reports. Information for this Draft EIR was obtained from on-site field observations; discussions with affected agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, hazards and hazardous materials, hydrology and water quality, noise, and transportation).

2.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the significant environmental effects associated with the construction and operation of the proposed project. The main purposes of this document as established by CEQA are:

- To disclose to decision-makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.

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[1] CEQA is found at California Public Resources Code, Division 13, Sections 21000 et seq.

[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, Sections 15000 et seq.

- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public the reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in CEQA and the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a project that has the potential to result in significant adverse environmental impacts. Prior to approving a project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in compliance with CEQA, find that the EIR reflects the independent judgment of the lead agency, adopt findings concerning each of the project's significant environmental impacts, mitigation measures and alternatives, and adopt a Statement of Overriding Considerations finding that specific overriding benefits of the project outweigh the significant environmental if the project would result in significant impacts that cannot be avoided.

2.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Introduction.** Describes the purpose of this Draft EIR, background of the proposed project, the Notice of Preparation, the use of incorporation by reference, and Final EIR certification.
- **Chapter 2: Executive Summary.** Summarizes the background and description of the proposed project, the format of this Draft EIR, the environmental consequences that would result from the proposed project, the alternatives to the proposed project, the recommended mitigation measures, and indicates the level of significance of environmental impacts with and without mitigation.
- **Chapter 3: Project Description.** Provides a detailed description of the proposed project location and the environmental setting on and surrounding the project site, the proposed project, the objectives of the proposed project, approvals anticipated to be required as a part of proposed project, and the intended uses of this EIR.
- **Chapter 4: Environmental Evaluation.** This chapter is organized into 9 sub-chapters corresponding to the environmental resource categories identified in CEQA Guidelines Appendix G, Environmental Checklist. This chapter provides a description of the physical environmental conditions in the City of Cupertino as they existed at the time the Notice of Preparation was published, from both a local and regional perspective, as well as an analysis of the potential environmental impacts of the proposed project, and recommended mitigation measures, if required, to lessen or avoid significant impacts. The environmental setting included in each sub-chapter provides baseline physical conditions from which the City of Cupertino will determine the significance of environmental impacts resulting from the proposed project. Each sub-chapter also contains a description of the thresholds of significance used to determine whether a significant impact would occur; the methodology used to identify and

evaluate the potential significant impacts of the proposed project; and the potential significant cumulative impacts to which the proposed project provides a cumulative contribution.

- **Chapter 5: Alternatives to the Proposed Project.** Provides an evaluation of alternatives to the proposed project, including the required "No Project" alternative, and identifies the environmentally superior alternative.
- **Chapter 6: CEQA-Required Assessment Conclusions.** Discusses growth inducement, cumulative impacts, significant unavoidable effects, and significant irreversible changes as a result of the proposed project. This chapter also identifies environmental issues that were determined not to require further environmental review as provided for in CEQA Guidelines Section 15128.
- **Chapter 7: Organizations and Persons Consulted.** Lists the people and organizations that contributed to the preparation of this EIR for the proposed project.
- **Appendices:** The appendices for this document (presented in PDF format on a CD attached to the back cover) contain the following supporting documents:
    - Appendix A: Initial Study
    - Appendix B: Notice of Preparation and Scoping Comments
    - Appendix C: Air Quality Assessment
    - Appendix D: Arborist Report & Tree Removal Plan
    - Appendix E: Greenhouse Gas Emissions Assessment
    - Appendix F: Limited Environmental Site Characterization
    - Appendix G: Acoustical Assessment
    - Appendix H: Transportation Assessment

2.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

According to Section 15121(a) of the CEQA Guidelines, the purpose of an EIR is to:

> *Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

This Draft EIR has been prepared as a project EIR, pursuant to Section 15161 of the CEQA Guidelines. As a project EIR, the environmental analysis will discuss the changes in the environment that would result from the construction and operation of The Westport Mixed-Use Project. This project EIR will examine the short-term impacts (project construction) and long-term impacts (project operation) that may occur as a result of project approval by the City of Cupertino City Council, as well as cumulative impacts.

2.2 SUMMARY OF PROPOSED PROJECT

The 8.1-acre project site is identified as Priority Housing Element Site A3 (The Oaks Shopping Center) in the City of Cupertino General Plan (Community Vision 2015-2040). The site is currently developed with a one-story shopping center (The Oaks Shopping Center) consisting of five buildings occupied with retail stores, restaurants, and offices, which were built between 1973 and 1976. Existing development on the site consists of approximately 71,250 square feet of shopping center development. The project site also includes 201,831 square feet of paved area, which includes associated parking, sidewalks, patios, and driveways, in addition to 45,486 square feet of native and non-native landscaping.

The proposed project would demolish the existing buildings onsite and construct 18 new buildings, that would have 242 residential units and 20,000 square feet of retail space, as well as below and at-grade parking, and associated landscape and hardscape areas. The proposed residential component would consist of three rowhouse buildings, 13 townhouse buildings (attached homes), and two mixed-use (residential and retail) buildings, including market-rate units and senior housing. The proposed retail component would be located on the ground level of the two mixed-use residential buildings. Residential-Retail Building 1 would have 17,600 square feet of retail space located at the corner of Stevens Creek Boulevard and Mary Avenue. Residential-Retail Building 2 would have 2,400 square feet of retail space on the ground level fronting Stevens Creek Boulevard. The proposed project would include one access point off Stevens Creek Boulevard and three additional access points off Mary Avenue. The below-grade parking would be located under Retail-Residential Building 1 and accessed from the central access point on Mary Avenue. Off-site improvements include the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. The proposed project is described in more detail in Chapter 3, Project Description, of this Draft EIR.

2.3 ALTERNATIVES TO THE PROPOSED PROJECT

This Draft EIR analyzes alternatives to the proposed project that would reduce or substantially lessen any of the significant environmental effects of the proposed project while feasibly attaining most of the basic objectives of the proposed project. CEQA Guidelines section 15126.6(d) requires the alternatives analysis to include sufficient information about each alternative to allow a comparison with the proposed project. While there is no set methodology for comparing the alternatives, this can be accomplished by using a matrix. CEQA Guidelines section 15126.6(2)(2) requires the EIR to identify the environmentally superior alternative. Identification of the environmentally superior alternative involves comparing the environmental effects of the alternatives with the environmental effects of the proposed project.

The following alternatives to the proposed project are analyzed in this EIR:

- No Project Alternative
- No Retail Development Alternative
- Reduced Retail Development Alternative

Chapter 5, Alternatives to the Proposed Project, of this Draft EIR, includes a complete discussion of these alternatives and of alternatives that were considered but rejected for further analysis. As discussed in Chapter 5, the No Retail Development Alternative would be the environmentally superior alternative.

2.4 AREAS OF CONCERN

The City of Cupertino issued a Notice of Preparation for the EIR on Thursday, July 11, 2019 and held a public scoping meeting on Thursday, July 18, 2019 to receive scoping comments. During the 30-day scoping period for this EIR, which concluded on Monday, August 12, 2019, public agencies and members of the public were invited to submit comments as to the scope and content of the EIR. While every environmental concern applicable to the CEQA process is addressed in this Draft EIR, the comments received focused primarily on the following environmental issues:

- Vehicular traffic congestion; specifically, on Highway 85 and Stevens Creek Boulevard
- Pedestrian and bicycle safety
- Noise impacts from construction and operation
- Air quality
- Building height
- Demands on public schools
- Loss of mature trees
- Bird safety
- Protection of night sky
- Too many housing units

Comments received during the public scoping period, including oral comments received at the Thursday, July 18, 2019 scoping meeting, are included in Appendix B, Notice of Preparation and Scoping Comments, of this Draft EIR. To the extent that these comments address environmental issues, they are addressed in Chapters 4.1 through 4.9 of this Draft EIR. Where comments received during the scoping period include topics that are outside of the purview of the analysis required under CEQA, these comments will be addressed by City staff during the approval process for the proposed project and, therefore, are not addressed further in this Draft EIR.

2.5 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant effect (impact) on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. An Initial Study was prepared for the proposed project (see Appendix A, Initial Study, of this Draft EIR). Based on the analysis in the Initial Study and General Plan EIR,[3] it was determined that development of the proposed project would not result in significant environmental impacts for the following topic areas; therefore, impacts related to these topics are not analyzed further in this Draft EIR:

- Aesthetics
- Agricultural and Forestry Resources
- Energy
- Hydrology and Water Quality
- Mineral Resources
- Population and Housing
- Public Services
- Recreation

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[3] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

- Land Use and Planning
- Wildfire

In addition, based on the analysis in the Initial Study it was determined that construction and operation of the proposed project would not result in significant environmental impacts for some of the environmental checklist questions. Table 2-1 includes the checklist questions, organized by environmental topic area, for which there would be no impact or impacts would be less-than-significant without mitigation and these questions are, therefore, not analyzed further in this Draft EIR.

TABLE 2-1 ENVIRONMENTAL CHECKLIST QUESTIONS NOT EVALUATED FURTHER IN THE EIR

Environmental Topic	Checklist Question	Significance Without Mitigation
Air Quality	Would the proposed project create an objectionable odors affecting a substantial number of people?	No Impact
Biological Resources	Would the proposed project have a substantial adverse effect on any riparian habitat or other sensitive natural community type?	No Impact
	Would the proposed project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	LTS
	Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species, their wildlife corridors, or nursery sites?	LTS
	Would the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact
Cultural Resources	Would the proposed project cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	LTS
Geology and Soils	Would the proposed project directly or indirectly cause potential substantial adverse effects including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides, mudslides or other similar hazards?	No Impact
	Would the proposed project result in substantial soil erosion or the loss of topsoil?	LTS
	Would the proposed project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	LTS
	Would the proposed project be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS
	Would the proposed project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact
Hazards and Hazardous Materials	Would the proposed project create significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	LTS
	Would the proposed project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?	No Impact

TABLE 2-1 ENVIRONMENTAL CHECKLIST QUESTIONS NOT EVALUATED FURTHER IN THE EIR

Environmental Topic	Checklist Question	Significance Without Mitigation
	For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed project result in a safety hazard for people living or working in the project area?	No Impact
	Would the proposed project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS
	Would the proposed project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	No Impact
Noise	For a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or pubic use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact
Transportation	Would the proposed project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	LTS
	Would the proposed project result in inadequate emergency access?	LTS
Utilities and Service Systems	Would the proposed project require or result in the construction of new water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	LTS
	Would the proposed project have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	LTS
	Would the proposed project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	LTS
	Would the proposed project comply with federal, state, and local statutes and regulations related to solid waste?	LTS

Notes: LTS = less than significant
For a full analysis of these issues, see the Initial Study in Appendix A of this Draft EIR.
Sources: City of Cupertino and PlaceWorks, July 2019.

Table 2-2 summarizes the conclusions of the environmental analysis contained in this Draft EIR and presents a summary of impacts and mitigation measures identified. It is organized to correspond with the environmental issues discussed in Chapter 4.1 through 4.9. The table is arranged in four columns: 1) impact statement; 2) significance prior to mitigation; 3) mitigation measures; and 4) significance after mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.9. As shown in Table 2-2, some significant impacts would be reduced to a less-than-significant level if the mitigation measures recommended in this Draft EIR are implemented.

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
Air Quality			
AQ-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	N/A	N/A
AQ-2: Uncontrolled fugitive dust (PM_{10} and $PM_{2.5}$) could expose the areas that are downwind of construction sites to air pollution from construction activities without the implementation of BAAQMD's best management practices.	S	**Mitigation Measure AQ-2: BAAQMD Basic Construction Measures.** Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are: ▪ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ▪ All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ▪ All vehicle speeds on unpaved roads shall be limited to 15 mph. ▪ All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. ▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		be checked by a certified mechanic and determined to be running in proper condition prior to operation. ▪ Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.	
AQ-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	N/A	N/A
AQ-4: Implementation of the project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.	S	Implement Mitigation Measure AQ-2.	LTS
Biological Resources			
BIO-1: Tree removal and demolition activities during site clearance could destroy active nests, and/or otherwise interfere with nesting of birds protected under federal and State law.	S	**Mitigation Measure BIO-1:** Nests of raptors and other birds shall be protected when in active use, as required by the federal Migratory Bird Treaty Act and the California Fish and Game Code. The construction contractor shall indicate the following on all construction plans, if construction activities and any required tree removal occur during the breeding season (February 1 and August 31). Preconstruction surveys shall: ▪ Be conducted by a qualified biologist prior to tree removal or grading, demolition, or construction activities. Note that preconstruction surveys are not required for tree removal or construction, grading, or demolition activities outside the nesting period. ▪ Be conducted no more than 14 days prior to the start of tree removal or construction. ▪ Be repeated at 14-day intervals until construction has been initiated in the area after which surveys can be stopped. ▪ Document locations of active nests containing viable eggs or young birds. Protective measures for active nests containing viable eggs or young birds shall be implemented under the direction of the qualified biologist	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		until the nests no longer contain eggs or young birds. Protective measures shall include: ▪ Establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest location as determined by the qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance and proximity to existing development. In general, exclusion zones shall be a minimum of 300 feet for raptors and 75 feet for passerines and other birds. ▪ Monitoring active nests within an exclusion zone on a weekly basis throughout the nesting season to identify signs of disturbance and confirm nesting status. ▪ An increase in the radius of an exclusion zone by the qualified biologist if project activities are determined to be adversely affecting the nesting birds. Exclusion zones may be reduced by the qualified biologist only in consultation with California Department of Fish and Wildlife. ▪ The protection measures shall remain in effect until the young have left the nest and are foraging independently or the nest is no longer active.	
BIO-2: Proposed development would result in removal of trees protected under City ordinance.	S	**Mitigation Measure BIO-2:** The proposed project shall comply with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18). A tree removal permit shall be obtained for the removal of any "protected tree," and replacement plantings shall be provided as approved by the City. If permitted, an appropriate in-lieu tree replacement fee may be paid to the City of Cupertino's Tree Fund as compensation for "protected trees" removed by the proposed project, where sufficient land area is not available on-site for adequate replacement and when approved by the City. In addition, a Tree Protection and Replacement Program (Program) shall be developed by a Certified Arborist prior to project approval and implemented during project construction to provide for adequate protection and replacement of "protected trees," as defined by the	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		City's Municipal Code. The Program shall include the following provisions: ▪ Adequate measures shall be defined to protect all trees to be preserved. These measures should include the establishment of a tree protection zone (TPZ) around each tree to be preserved, in which no disturbance is permitted. For design purposes, the TPZ shall be located at the dripline of the tree or 10 feet, whichever is greater. If necessary, the TPZ for construction-tolerant species (i.e., coast live oaks) may be reduced to 7 feet. ▪ Temporary construction fencing shall be installed at the perimeter of TPZs prior to demolition, grubbing, or grading. Fences shall be 6-foot chain link or equivalent, as approved by the City of Cupertino. Fences shall remain until all construction is completed. Fences shall not be relocated or removed without permission from the consulting arborist. ▪ No grading, excavation, or storage of materials shall be permitted within TPZs. Construction trailers, traffic, and storage areas shall remain outside fenced areas at all times. No excess soil, chemicals, debris, equipment, or other materials shall be dumped or stored within he TPZ. ▪ Underground services including utilities, sub-drains, water or sewer shall be routed around the TPZ. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury. Irrigation systems must be designed so that no trenching will occur within the TPZ. ▪ Construction activities associated with structures and underground features to be removed within the TPZ shall use the smallest equipment and operate from outside the TPZ. The consulting arborist shall be on-site during all operations within the TPZ to monitor demolition activity. ▪ All grading, improvement plans, and construction plans shall clearly indicate trees proposed to be removed, altered, or otherwise affected by development construction. The tree information on	

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		grading and development plans should indicate the number, size, species, assigned tree number, and location of the dripline of all trees that are to be retained/preserved. All plans shall also include tree preservation guidelines prepared by the consulting arborist. ▪ The demolition contractor shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection. Prior to beginning work, the contractor(s) working in the vicinity of trees to be preserved shall be required to meet with the consulting arborist at the site to review all work procedures, access routes, storage areas, and tree protection measures. ▪ All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved. Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the consulting arborist. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied. ▪ Any plan changes affecting trees shall be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans. ▪ Trees to be preserved may require pruning to provide construction clearance. All pruning shall be completed by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the 2002 Best Management Practices for Pruning published by the International Society of Arboriculture, and adhere to the most recent editions of the American National Standard for Tree Care Operations (Section Z133.1) and Pruning (Section A300). ▪ Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the consulting arborist. ▪ Any demolition or excavation, such as grading, pad preparation, excavation, and trenching, within the dripline or other work that is expected to encounter tree roots should be approved and monitored	

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		by the consulting arborist. Any root pruning required for construction purposes shall receive prior approval of, and by supervised by, the consulting arborist. Roots shall be cut by manually digging a trench and cutting exposed roots with a sharp saw. ▪ Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Tree stumps shall be ground 12 inches below ground surface. ▪ All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Game Code Sections 3503 through 3513 to not disturb nesting birds. To the extent feasible, tree pruning, and removal shall be scheduled outside of the breeding season. Breeding bird surveys shall be conducted prior to tree work. Qualified biologists shall be involved in establishing work buffers for active nests. (see Mitigation Measure BIO-1) ▪ The vertical and horizontal locations of all the trees identified for preservation shall be established and plotted on all plans. These plans shall be forwards to the consulting arborist for review and comment. ▪ Foundations, footings, and pavements on expansive soils near trees shall be designed to withstand differential displacement to protect the soil surrounding the tree roots. ▪ Any liming within 50 feet of any tree shall be prohibited, as lime is toxic to tree roots. Any herbicides placed under paving materials shall be safe for use under trees and labeled for that use. ▪ Brush from pruning and trees removal operations shall be chipped and spread beneath the trees within the TPZ. Mulch shall be between 2 inches and 4 inches in depth and kept at a minimum of 3 feet from the base of the trees. ▪ All recommendations for tree preservation made by the applicant's consulting arborist shall be followed.	
BIO-3: The proposed project in combination with past, present, and reasonably foreseeable projects, would not	S	Implement Mitigation Measures BIO-1 and BIO-2.	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
result in significant cumulative impacts with respect to biological resources.			
Cultural and Tribal Cultural Resources			

CULT-1: Construction of the proposed project would have the potential to cause a significant impact to an unknown archaeological resource pursuant to CEQA Guidelines Section 15064.5.	S	**Mitigation Measure CULT-1:** If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing (including grading, demolition and/or construction) activities:
		▪ All work within 50 feet of the resources shall be halted, the City shall be notified, and a qualified archaeologist shall be consulted. The contractor shall cooperate in the recovery of the materials. Work may proceed on other parts of the project site while mitigation for tribal cultural resources, historical resources or unique archaeological resources is being carried out.
		▪ The qualified archaeologist shall prepare a report for the evaluation of the resource to the California Register of Historical Places and the City Building Department. The report shall also include appropriate recommendations regarding the significance of the find and appropriate mitigations as follows:
		  ▪ If the resource is a non-tribal resource, the archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5.
		  ▪ If the resource is a tribal resource – whether historic or prehistoric – the consulting archaeologist shall consult with the appropriate tribe(s) to evaluate the significance of the resource and to recommend appropriate and feasible avoidance, testing, preservation or mitigation measures, in light of factors such as the significance of the find, proposed project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) may be implemented.
		▪ All significant non-tribal cultural materials recovered shall be, as necessary, and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.
			LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
CULT-2: The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: 1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.	LTS	N/A	N/A
CULT-3: Construction of the proposed project would have the potential to cause a significant impact to an unknown tribal cultural resource as defined in Public Resources Code 21074.	S	**Mitigation Measure CULT-3:** Implement Mitigation Measure CULT-1.	LTS
CULT-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in cumulative impacts with respect to cultural resources.	S	Implement Mitigation Measure CULT-1	LTS
Geology and Soils			
GEO-1: Construction of the proposed project would have the potential to directly or indirectly affect an unknown unique paleontological resource.	S	**Mitigation Measure GEO-1:** The construction contractor shall incorporate the following in all grading, demolition, and construction plans: ▪ In the event that fossils or fossil-bearing deposits are discovered during grading, demolition, or building, excavations within 50 feet of the find shall be temporarily halted or diverted.	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		▪ The contractor shall notify the City of Cupertino Building Department and a City-approved qualified paleontologist to examine the discovery. ▪ The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. ▪ The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. ▪ If the project applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project based on the qualities that make the resource important. The excavation plan shall be submitted to the City for review and approval prior to implementation.	
GEO-2: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.	S	Implement Mitigation Measure GEO-1.	LTS
Greenhouse Gas Emissions			
GHG-1: The proposed project would not directly or indirectly generate GHG emissions that may have a significant impact on the environment.	LTS	N/A	N/A
GHG-2: The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	LTS	N/A	N/A
GHG-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to GHG emissions.	LTS	N/A	N/A

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
Hazards and Hazardous Materials			
HAZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials during construction.	LTS		N/A
HAZ-2: The proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	LTS	N/A	N/A
HAZ-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to hazards and hazardous materials.	LTS	N/A	N/A
Noise			
NOISE-1: The proposed project could generate a substantial temporary increase in ambient noise levels in the vicinity of the proposed project during the construction phase that could exceed the standards established in the local noise ordinance.	LTS	**Mitigation Measure NOISE-1:** Prior to Grading Permit issuance or the start of demolition activities, the project applicant shall demonstrate, to the satisfaction of the City of Cupertino Public Works Director and/or Community Development Director, that the proposed project complies with the following: ▪ Pursuant to Cupertino Municipal Code (CMC) Section 10.48.053 the construction activities shall be limited to daytime hours as defined in CMC Section 10.48.010 (i.e., daytime hours are from 7:00 a.m. to 8:00 p.m. on weekdays). ▪ At least 90 days prior to the start of construction activities, all offsite businesses and residents within 300 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the proposed project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification should include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. ▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the	N/A

EXECUTIVE SUMMARY

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		public, which includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City. ▪ During the entire active construction period, equipment and trucks used for project construction will utilize the best available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. ▪ During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible. ▪ Haul routes shall be selected to avoid the greatest amount of sensitive use areas. ▪ Signs will be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment will be turned off if not in use for more than 5 minutes. ▪ During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only. The construction manager will use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.	
NOISE-2: The proposed project would not generate excessive groundborne noise levels.	LTS	N/A	N/A
NOISE-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to noise.	S	Implement Mitigation Measure NOISE-1.	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
Transportation and Circulation			
TRANS-1: The proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	LTS	N/A	N/A
TRANS-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	LTS	N/A	N/A
TRANS-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in additional cumulatively considerable impacts.	LTS	N/A	N/A
Utilities and Service Systems			
UTIL-1: Implementation of the proposed project may result in a determination by the wastewater treatment provider, which serves or may serve the proposed project, that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	S	**Mitigation Measure UTIL-1:** No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods: 1) Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or 2) Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD. The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the *San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient* table in the May 2007, *City of Santa Clara Sanitary Sewer Capacity*	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		Assessment,[4] and *California Green Building Standards*, unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD. If the prior agreement between CSD and the City of Santa Clara that currently limits the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system were to be updated to increase the permitted peak wet weather flow sufficiently to accommodate, this would also change the impacts of the project to less than significant. If this were to occur prior to the City's approval of building permits, then Mitigation Measure UTIL-1 would no longer be required to be implemented.	
UTIL-2: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to wastewater treatment.	S	Implement Mitigation Measure UTIL-1	LTS

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[4] Mark Thomas and Associates, July 19, 2018, Email communication with Cupertino Public Works.

3. *Project Description*

3.1 INTRODUCTION

The project applicant, KT Urban, is proposing the Westport Mixed-Use Project, herein referred to as "proposed project." The proposed project would involve the demolition of existing buildings and construction and operation of 242 residential units comprised of 19 rowhouse units, 69 townhouse units, 115 multi-family units, and 39 senior residential units, as well as 20,000 square feet of retail space. The proposed project would also include above- and below-grade parking, as well as associated internal roadways, sidewalks, and landscaping, and off-site improvements for a Class IV bikeway and a bus stop.

This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of the project site, as well as the proposed project objectives, the principal project features, project phasing, approximate construction schedule, and required permits and approvals. Additional descriptions of the environmental setting as they relate to each of the environmental issues analyzed in Chapter 4, Environmental Assessment, of this Draft EIR, are included in the environmental setting discussions contained within Chapters 4.1 through 4.9.

3.2 OVERVIEW AND SETTING

3.2.1 BACKGROUND

The 8.1-acre project site is identified as a Priority Housing Element Site A3 in the City of Cupertino General Plan (Community Vision 2015-2040) to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 to 2022 planning period and meet Cupertino's fair-share housing obligation of 1,064 units.[1] The City certified the Environmental Impact Report (EIR) for the General Plan Amendment, Housing Element Update, and associated Rezoning Project,[2] which included an evaluation of the project site as "Housing Element Site 18 (The Oaks Shopping Center)" with a new mixed-use development including residential uses that could have up to 235 net residential units. The EIR evaluated a maximum height of 75 feet with a retail component and a permitted residential density of up to 35 dwelling units per acre and a Zoning designation change to Planned Development with General Commercial, Residential (P(CG, Res)), to allow for future mixed-use development including residential uses.

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[1] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 4, Housing Element, Table HE-5: Summary of Priority Housing Element Sites to Meet the RHNA - Scenario A, page HE-18.

[2] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

3.2.2 REGIONAL LOCATION

Figure 3-1 shows the relationship of the project site to Cupertino and the greater San Francisco Bay area. The project site is located in the central portion of Cupertino, which is in Santa Clara County. Cupertino is approximately 46 miles southeast of San Francisco and is one of the cities that make up the area commonly known as Silicon Valley. Cupertino is located north of the City of Saratoga, east of unincorporated Santa Clara County, south of the City of Sunnyvale, and west of the City of San José. Cupertino also shares a boundary with the City of Los Altos to the north.

Regional access to the project site is provided by Interstate 280 (I-280), State Route 85 (SR-85), Stevens Creek Boulevard, Santa Clara Valley Transportation Authority (VTA) bus service, and by Caltrain via the Sunnyvale, Lawrence, and Santa Clara Caltrain Stations. Caltrain is operated by the Peninsula Corridor Joint Powers Board.

3.2.3 LOCAL SETTING

The 8.1-acre project site is the existing Oaks Shopping Center on Stevens Creek Boulevard. The project site includes several street addresses on Stevens Creek Boulevard; therefore, the most centrally located 21267 Stevens Creek Boulevard address is used to identify the site.[3] As shown in Figure 3-2, the project site is bounded by Mary Avenue to the north and east, Stevens Creek Boulevard to the south, and a SR-85 on-ramp to the west off Stevens Creek Boulevard. The project site is surrounded by the Glenbrook Apartments to the north, the Cupertino Senior Center and Cupertino Memorial Park to the east, De Anza College to the south, and residential and industrial land uses to the west beyond SR-85. The project site is directly accessible from Stevens Creek Boulevard and Mary Avenue.

The closest VTA bus stop (Line 81) is located at the Mary Avenue/Stevens Creek Boulevard intersection, approximately 200 feet east of the site, and bus stops are located at De Anza College, approximately 1,900 feet to the east at the Stevens Creek Boulevard/South Stelling Road intersection. The nearest Caltrain station to the project site is the Sunnyvale station, which is located approximately 4 miles to north.

The nearest public airports are San José International Airport, approximately 7 miles to the northeast, and Palo Alto Airport, approximately 9.5 miles to the northwest. The nearest heliports are McCandless Towers Heliport, approximately 5.5 miles to the northeast, and County Medical Center Heliport, approximately 6 miles to the east. The nearest private airport is Moffett Federal Airfield, approximately 6 miles to the north.[4]

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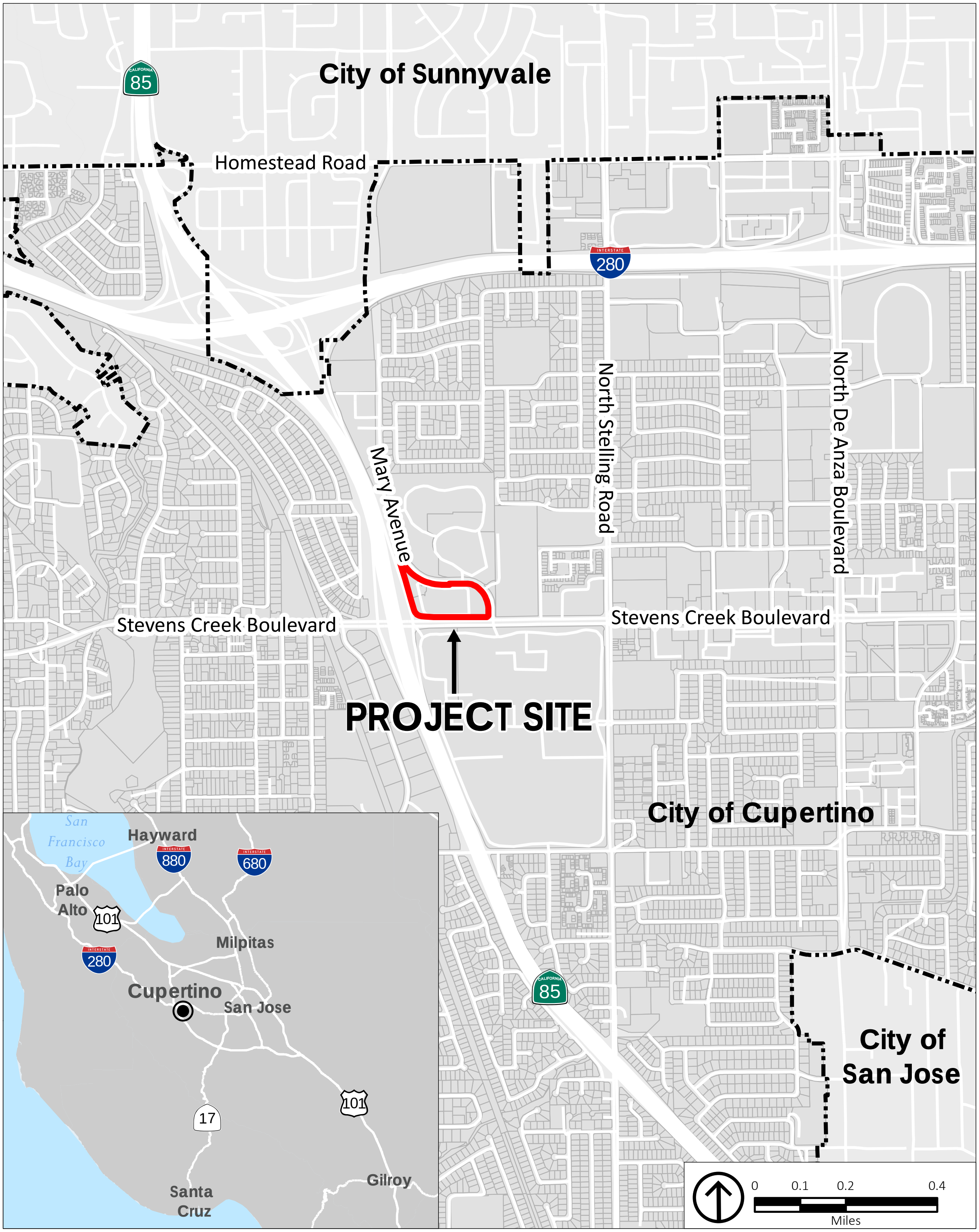
[3] The site's addresses are 21255, 21265, 21267, 21269 and 21271 Stevens Creek Boulevard.

[4] Moffett Federal Airport is a joint civil-military airport.

PROJECT DESCRIPTION



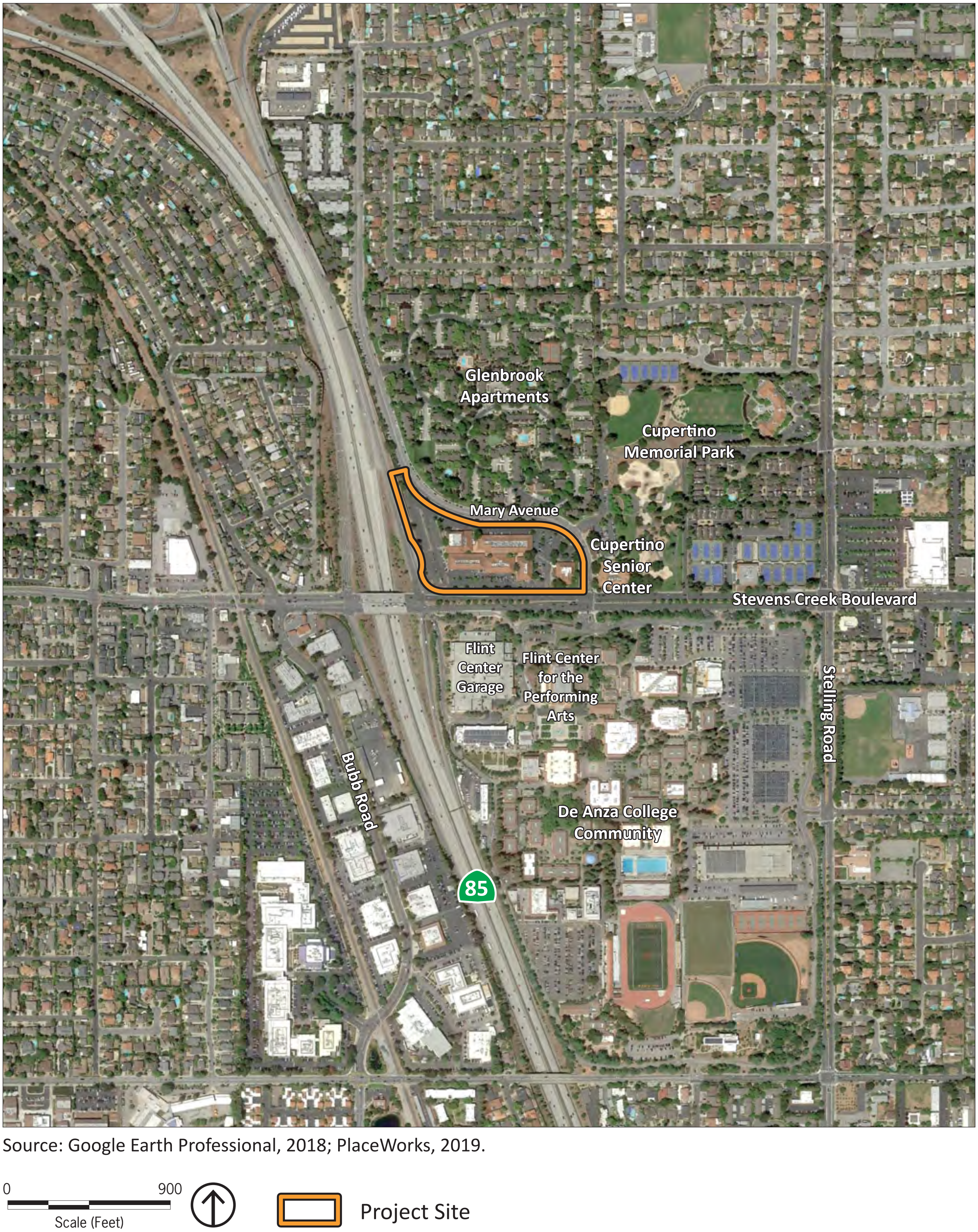
Source: ESRI, 2017; PlaceWorks, 2019.

🟥 Project Site

▭ Cupertino City Limit

Figure 3-1

Regional and Vicinity Map



Source: Google Earth Professional, 2018; PlaceWorks, 2019.

Figure 3-2
Aerial View of Project Site

3.2.4 EXISTING SITE CONDITIONS

3.2.4.1 SITE CHARACTER

The project site is currently developed with a one-story shopping center, consisting of five occupied buildings with retail stores and restaurants, which was built between 1973 and 1976. The existing shopping center is approximately 71,250 square feet and is about 85 percent occupied (or 60,560 square feet). The project site also has 201,831 square feet of paved area, which includes associated parking, sidewalks, patios, and driveways, and 45,486 square feet of native and non-native landscaping. See Figure 3-3. Due to the age of the buildings, the buildings have the potential to be considered historic buildings; however, they are not currently listed on the National Register of Historic Places or the list of California Historical resources.[5]

3.2.4.2 VEGETATION AND LANDCOVER

Using data from the Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG)[6] habitat mapping program, the site is classified as an "urban area". The urban area classification areas tend to have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance. The project site does not contain and is not adjacent to habitat for special-status plant or animal species.[7] According to the California Natural Diversity Database, the nearest special-status animals (White-tailed kite and Yuma myotis) are located approximately 0.5 miles to the southwest.

The California Department of Forestry and Fire Protection (CAL FIRE) has designated the project site as a Local Responsibility Area (LRA) and a non-very high fire hazard severity zone (NVHFHSZ). The project site is not near lands designated as a State Responsibility Area (SRA) by CAL FIRE. The nearest SRA is approximately 2 miles to the west of the project site.[8] The proposed project is not located within the wildland-urban interface, which is an area of transition between wildland (unoccupied land) and land with human development (occupied land).[9]

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[5] California Office of Historic Preservation, 2019, California Historical Resources, accessed June 11, 2019 at http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=43.

[6] The CALVEG system was initiated in January 1978 by the Region 5 Ecology Group of the US Forest Service to classify California's existing vegetation communities for use in statewide resource planning. CALVEG maps use a hierarchical classification on the following categories: forest; woodland; chaparral; shrubs; and herbaceous.

[7] Special-status species are plants and animals that are legally protected under the Endangered Species Act/California Endangered Species Act (ESA/CESA) or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.

[8] CAL FIRE, 2008, Cupertino, Very High Fire Hazard Severity Zones in LRA. http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/santa_clara/Cupertino.pdf.

[9] CAL FIRE, 2018, Wildland-Urban Interface Fire Threat, accessed June 11, 2019 at http://www.arcgis.com/home/item.html?id=d45bf08448354073a26675776f2d09cb.

Source: Google Earth Professional, 2018; PlaceWorks, 2019.

▭ Project Site

Figure 3-3
Existing Conditions

The project site is generally flat with elevations ranging from approximately 290 feet above sea level on the northeast portion of the site to approximately 300 feet above sea level on the northwest portion of the site. Site topography generally slopes downward to the east or southeast towards the intersection of Stevens Creek Boulevard and Mary Avenue. Groundwater likely flows to the east, generally following surface topography. The surficial geology is described as young, unconsolidated Quaternary Valley Floor Alluvium.[10]

The existing impervious surface totals 307,444 square feet. Stormwater from the site would drain to a network of City-maintained storm drains that collect runoff from city streets and carries it to the creeks that run through Cupertino to San Francisco Bay.

3.2.5 LAND USE AND ZONING

The project site is assigned Assessor's Parcel Numbers (APNs) 326-27-042 and 326-27-043. The General Plan describes the vision and standards for future development on the site in the defined special planning area, gateway, Housing Element, and land use designation. In addition, the General Plan identifies the site as being within a regional priority development area or "PDA." A description of the applicable General Plan policies and permitted development is provided below.

3.2.5.1 GENERAL PLAN

Special Planning Area

The project site is within the Heart of the City Special Area, which is a key mixed-use, commercial corridor in Cupertino. The Heart of the City Special Area covers development within this Special Area is guided by the *Heart of the City Specific Plan*. The *Heart of the City Specific Plan* is split into five subareas, including the Oaks Gateway within the West Stevens Creek Boulevard subarea along Stevens Creek Boulevard between SR-85 and Stelling Road, which encompasses the project site. The primary use for the West Stevens Creek Boulevard subarea is quasi-public/public facilities, with supporting uses including mixed commercial/residential. Development in the Heart of the City Special Area is envisioned to create a greater sense of place, more community identity, and a positive and memorable experience for residents, workers, and visitors of Cupertino.[11]

Designated Gateway

The project site is in the Oaks Gateway. Gateways represent key entry points to the city. As shown on the Heart of the City Special Area Diagram[12] and the Community Form Diagram in the General Plan,[13] the

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[10] City of Cupertino General Plan EIR, Chapter 4.5 Geology, Soils, Seismicity, Figure 4.5-1 Geologic Map, Cupertino, California.

[11] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 2, Planning Areas, page PA-5.

[12] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 2, Planning Area, Heart of the City Special Area Diagram, page PA-7.

[13] City of Cupertino General Plan (Community Vision 2015-2040), Chapter3, Land Use and Community Design, Figure LU-2, Community Form Diagram, page LU-16 and LU-17.

Oaks Gateway is a neighborhood center. A neighborhood center is an area intended to provide shopping and gathering spaces for local residents. Mixed-use development is allowed in the Oaks Gateway if it promotes revitalization of retail uses, creation of new gathering spaces, and parcel assembly. General Plan Policy LU-14.5 (Oaks Gateway Node) states that the Oaks Gateway is a retail and shopping node and that new residential, if allowed, should be designed on the "mixed-use village" concept.[14] The mixed-use urban village concept includes providing parcel assembly, complete site redevelopment, mixed-use village layout with streets, alley, sidewalks, and open spaces, mix of retail uses, public open spaces, and high-quality, pedestrian-oriented design.[15]

Priority Housing Element Site

The project site is Priority Housing Element Site A3 (The Oaks Shopping Center). As described in the General Plan, many of the City's Housing Element sites, including the project site, are located in major corridors to reduce traffic and environmental impacts and preserve neighborhoods.[16] The maximum building height for the project site is 45 feet, and the maximum density is 30 dwelling units per acre (du/ac).[17] Housing Element Strategy HE-2.3.7 (Density Bonus Ordinance) states that for projects that are consistent with the Density Bonus Ordinance (CMC Chapter 19.56), density bonuses, and incentives and concession that result in identifiable cost reductions needed to make the housing affordable, would apply.[18]

Land Use Designation

The General Plan land use designation for the project site is Commercial/Residential. This land use designation allows primarily commercial uses and secondarily residential uses or a compatible combination of the two. Commercial use means retail sales, businesses, limited professional offices, and service establishments with direct contact with customers. This applies to commercial activities ranging from neighborhood convenience stores to regionally oriented specialty stores. Retail stores that would be a nuisance for adjoining neighborhoods or harmful to the community identity would be regulated by the commercial zoning ordinance and use permit procedure. Smaller commercial parcels in existing residential areas may be needed to provide local neighborhood serving retail; otherwise, they may be redeveloped at residential densities compatible with the surroundings.

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[14] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-44.

[15] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-18.

[16] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-18.

[17] *Heart of the City Specific Plan* (2014) page 15 (height), and City of Cupertino General Plan (Community Vision 2015-2040), Chapter 4, Housing Element, Table HE-5: Summary of Priority Housing Element Sites to Meet the RHNA - Scenario A, page HE-17 (density).

[18] City of Cupertino Municipal Code, Title 19, Zoning, Chapter 19.56 Density Bonus, Sections 19.56.030, Density Bonus, and 19.56.040, Incentives or Concessions, Waivers and Reduction of Parking Standards.

Priority Development Area/Transit Priority Area

Plan Bay Area 2040 is the Bay Area's current Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS) that was adopted jointly by the Association of Bay Area Government's (ABAG) and Metropolitan Transportation Commission (MTC) on July 26, 2017. As part of the implementing framework for *Plan Bay Area*, local governments, including Cupertino, have identified Priority Development Areas (PDAs) to focus growth.[19] PDAs are transit-oriented, infill development opportunity areas within existing communities. In addition to PDAs, *Plan Bay Area* identifies Transit Priority Areas (TPAs), which are areas within one-half mile of a major transit stop (that have 15 minute or less service level frequency) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.

An overarching goal of the regional *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, vehicle miles traveled (also referred to as "VMT"), and associated greenhouse gas (GHG) emissions reductions.

The project site is located in a Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas PDA. Because the proposed project is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes, it is also a designated TPA.[20]

3.2.5.2 ZONING ORDINANCE

Zoning District

The project site is zoned Planned Development with General Commercial and Residential (P(CG,RES)) on the City's Zoning Map. Pursuant to Cupertino Municipal Code (CMC) Section 19.80.030(B), all planned development districts are identified on the zoning map with the letter coding "P" followed by a reference to the general type of use allowed in the particular planning development zoning district. [21] The general types of uses allowed on the project site are General Commercial and Residential.

As described in CMC Section 19.80.010, the planned development zoning district is intended to provide a means of guiding land development or redevelopment of the city that is uniquely suited for planned coordination of land uses.[22] Development in "P" zoning district provides for a greater flexibility of land use

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[19] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-7.

[20] *Plan Bay Area*, Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining, https://www.planbayarea.org/pda-tpa-map, accessed on July 11, 2019.

[21] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.80, Planned Development, Section 19.80.030, Establishment of Districts-Permitted and Conditional Uses.

[22] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.80, Planned Development, Section 19.80.010, Purpose.

intensity and design because of accessibility, ownership patterns, topographical considerations, and community design objectives. This zoning district is intended to accomplish the following:

- Encourage variety in the development pattern of the community.
- Promote a more desirable living environment.
- Encourage creative approaches in land development.
- Provide a means of reducing the amount of improvements required in development through better design and land planning.
- Conserve natural features.
- Facilitate a more aesthetic and efficient use of open spaces.
- Encourage the creation of public or private common open space.

Pursuant to CMC Chapter 19.60,[23] the General Commercial (CG) zoning district is intended to regulate retail, office, and service establishments offering goods and services to the general public to assure maximum compatibility with surrounding residential areas, as well as minimize adverse traffic impacts resulting from commercial development.

Density Bonus

Title 19, Zoning, Chapter 19.56 Density Bonus, is intended to comply with the State Density Bonus Law, Government Code Section 65915,[24] which provides that a local agency shall adopt an ordinance specifying how the agency will comply with that section. CMC Section 19.56.020 states that housing developments resulting in a net increase of at least five units (excluding density bonus units) are eligible for a density bonus when the applicant proposes at least one of the listed requirements and the requirements of CMC Section 19.56.020(C), if applicable. One of the criteria for eligibility for a density bonus is construction of senior housing (CMC Section 19.56.020(A)(1)(d)). CMC Section 19.56.020(C) is related to sites with existing rental housing and would not apply to the proposed project; therefore, CMC Section 19.56.030(B) applies. Section 19.56.030(B) states that senior housing developments are entitled to a maximum density bonus of 20 percent provided the development consists of at least 35 units, conforms to Civil Code Section 51.3,[25] and the units are reserved for qualifying residents whether or not the housing includes affordable units. Section 19.56.040, Incentives or Concessions, Waivers and Reduction of Parking Standards, states that changes to development standards or zoning code requirements may be allowed under certain conditions.[26] The granting of a density bonus, incentive or concession, in and of itself, shall not require a general plan amendment, zone change, or other discretionary approval and shall be reviewed concurrently with the review of the housing development.

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[23] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.60, General Commercial (CG) Zones, Section 19.60.010, Purpose.

[24] Government Code, Title 7, Planning and Land Use, Division 1, Planning and Zoning Sections, Chapter 4.3, Density Bonuses and Other Incentives Section 65915.

[25] Civil Code, Division 1, Persons, Part 2, Personal Rights, Section 51.3.

[26] City of Cupertino Municipal Code, Title 19, Zoning, Chapter 19.56 Density Bonus, Sections 19.56.030, Density Bonus, and 19.56.040, Incentives or Concessions, Waives and Reduction of Parking Standards.

3.2.5.3 OTHER REQUIREMENTS

The CMC includes various directives to minimize adverse impacts from development in Cupertino. Such directives are related to setbacks for adequate light, air, and clear lines of sight at intersections, water quality, the protection of designated trees, energy conservation, the provisions of adequate infrastructure, as well as the reduction of solid waste. Descriptions of these directives are included in the environmental setting discussions and impact discussions contained within Chapters 4.1 through 4.9.

3.3 PROJECT OBJECTIVES

The objectives of the proposed project are as follows:

- Redevelop an existing retail center on Mary Avenue and Stevens Creek Boulevard with desirable amenities and housing.
- Meet the City's Regional Housing Needs Allocation (RHNA) for 2014-2022.
- Enhance the vibrancy of Cupertino's Heart of the City as a key mixed-use, commercial corridor by providing a pedestrian-friendly community that includes housing, open space and greenery, and neighborhood retail.
- Provide senior housing in close proximity to the Cupertino Senior Citizen Center.
- Create a prominent gateway development that incorporates quality architectural design and materials, open space, and artwork to announce entry into Cupertino's Heart of the City.
- Create a mixed-use development that places residential and commercial uses in close proximity to each other, and close to transit options.
- Help the City to achieve its affordable housing goals through the inclusion of senior housing units within a residential and mixed-use development project.

3.4 PROPOSED PROJECT

Implementation of the proposed project would result in the construction and operation of a residential mixed-use development on a site that is currently developed. The proposed development and construction phasing, population and employment projections, and the required permits and approvals are described in detail below. A complete set of conceptual site plans is provided at https://www.cupertino.org/westport.

3.4.1 PROPOSED DEVELOPMENT

The proposed development is summarized in Table 3-1 and described below. See Figures 3-4 through 3-9.

TABLE 3-1 PROPOSED DEVELOPMENT BY LAND USE

			Square Footage			
Building Type	Buildings	Units	Residential	Garage	Retail	Common Open Space
Rowhouses	3	19	34,245	10,840		155 square feet per unit
Townhomes	13	69	139,850	39,450		
Residential-Retail Building 1	1	115	193,500	97,750	17,600	
Residential-Retail Building 2	1	39	38,800	n/a	2,400	
Total	**18**	**242**	**406,395**	**148,040**	**20,000**	**37,601**

Note: Square footages are rounded up and include residential and parking.
Source: C2K Architecture Inc. (project applicant), November 2018.

3.4.1.1 RESIDENTIAL

The proposed residential component consists of three rowhouse buildings (attached homes) located on the western edge of the project site, 13 townhouse buildings (attached homes) located at the center of the project site, and two mixed-use residential, including senior housing, located on the eastern portion of the project site. See Figure 3-4. The rowhouse buildings would be three stories tall (30 feet at the roofline) and have a total of 19 three-story units. See Figure 3-5. The townhouse buildings would also be three stories tall (30 feet at the roofline) and have a total of 69 three-story units. See Figure 3-6.

The two Residential-Retail Buildings (Building 1 and 2) would be located on the eastern edge of the project site. Residential-Retail Building 1 would be six stories tall (70 feet at the roofline). See Figures 3-7 and 3-8. Building 1 would have 115 market-rate units on floors two through six consisting of one-, two-, and three-bedroom units. Building 1 would also include a fitness center, lounge, and outdoor terrace on the second story for resident use only.

Residential-Retail Building 2 would be five stories tall (55 feet at the roofline). See Figure 3-9. Building 2 would have 39 senior housing units located on floors two through five, which would consist of studio and one-bedroom units. Building 2 would also include a common room on the ground level for use by residents only.

3.4.1.2 RETAIL

The proposed retail component would consist of a total of 20,000 square feet and would be located on the ground level of the Residential-Retail Buildings 1 and 2. Residential-Retail Building 1 would have 17,600 square feet of retail space located at the corner of Stevens Creek Boulevard and Mary Avenue. Residential-Retail Building 2 would have 2,400 square feet of retail space on the ground level fronting Stevens Creek Boulevard. At-grade parking for these retail uses would be provided along Mary Avenue for Building 1 and along the internal street along Building 2. A one-level subterranean parking garage would be provided below Building 1. See Figure 3-4.

Source: C2K Architecture Inc., November 2018.

0 200
Scale (Feet)

Figure 3-4
Conceptual Site Plan

Source: C2K Architecture Inc., November 2018.

Figure 3-5
Site Sections: Rowhouses

Source: C2K Architecture Inc., November 2018.

Figure 3-6

Site Section: Townhomes

1 A214 BUILDING 1 - MARY AVE ELEVATION - NORTH

North

2 A214 BUILDING 1 - MARY AVE ELEVATION - EAST

East

Source: C2K Architecture Inc., November 2018.

Figure 3-7

Elevations: Residential-Retail Building 1 (North, East)

1 A213 BUILDING 1 - STEVENS CREEK BLVD ELEVATION - SOUTH

South

2 A213 BUILDING 1 - WEST ELEVATION

West

Source: C2K Architecture Inc., November 2018.

Figure 3-8

Elevations: Residential-Retail Building 1 (South, West)

Source: C2K Architecture Inc., November 2018.

Figure 3-9

Elevations: Residential-Retail Building 2 (North, East, South, West)

3.4.1.3 OPEN SPACE

Private open space areas would be provided for each residential unit either as a balcony or patio. The rowhouses would include private patios that range in size from 295 to 375 square feet per unit. The townhomes would include private patios that range in size from 104 to 125 square feet per unit. Building 1 would include private balconies that range in size from 60 to 132 square feet per unit. Building 2 would include private balconies that are 60 square feet per unit.

Common open space areas would be provided throughout the project site including a central green space. The project site would include 37,601 square feet of common open space. Common retail outdoor space totaling 2,400 square feet would be provided at Residential-Retail Building 1 and 2.

3.4.1.4 LANDSCAPING

The proposed project would include landscaping throughout the interior and the perimeter of the project site. See Figure 3-10. The proposed project would retain some existing trees and would plant approximately 400 additional trees. The proposed project would result in 45,486 square feet of replaced pervious surfaces and 42,360 square feet of new pervious surfaces for a total of 87,846 square feet of pervious landscaped surfaces and 6,852 square feet of pervious paving pursuant to the City's Landscape Ordinance (CMC Chapter 14.15). The proposed landscaping would be consistent with the surrounding Northern California landscape and would include native and/or adaptive, drought resistant plant materials grouped by hydrozones (i.e., areas similar water use). The majority of plantings would be drought tolerant grasses, shrubs, and trees that, once established, would be adapted to a dry summer and intermittent rain in the winter season. Landscaping would be specifically designed around the rowhouses, townhomes, and mixed-use units to provide privacy between adjacent land uses.

3.4.1.5 LIGHTING AND GLARE

The source, intensity, and type of exterior lighting for the project site would generally be provided for the purpose of orienting site users and for safety needs. All on-site lighting would be low-level illumination and shielded to reduce light spill or glare. There would be no up-lighting or spotlights on the project site and non-emergency lighting would be turned off at night. In landscaped and paved areas, light sources would be concealed and not visible from a public viewpoint, and landscaping would not funnel open space toward the building façade. All exterior surface and above-ground mounted fixtures would be complementary to the architectural theme. The proposed project would limit large areas of transparent or reflective glass by including solid wall buildings with recessed windows, mullions or muntins[27] to divide overall window size, non-reflective glass railings, fritted glass and opaque panels, arcades, and overhanging roofs that shield the windows. The proposed project would avoid transparent glass skyways, walkways, and entryways, as well as free-standing glass walls and transparent building corners. The proposed landscaping would also reduce reflections and view of foliage through glass.

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[27] A *mullion* is a vertical element that forms a division between units of a window or screen or is used decoratively. When dividing adjacent window units is its primary purpose, it is a rigid support to the glazing of the window. *Muntins* on the other hand divide, reinforce and join glass within a single window or sash frame. These are the small vertical and horizontal bars that change large pieces of glass into small "divided lites."

PLANTING PALETTE

	KEY	COMMON NAME	BOTANICAL NAME	LOCATION / NOTES
	TREES			
●	1	CRAPE MYRTLE	LAGERSTROEMIA X FAURIEI	RESIDENTIAL CORRIDORS
●	2	DEODAR CEDAR	CEDRUS DEODARA	NORTH, SOUTHWEST PARKS, WEST BOUNDARY
●	3	GINGKO 'PRINCETON SENTRY'	GINGKO BILOBA 'P.S.'	NORTHWEST, SOUTHWEST PARKS, SOUTHEAST RETAIL
●	4	CALIFORNIA LIVE OAK	QUERCUS AGRIFOLIA	FRONTAGE ALONG STEVENS BLVD.
●	5	'BOSQUE' CHINESE ELM	ULMUS PARVIFOLIA 'BOSQUE'	STREET TREES ALONG MARY AVE.
●	6	CHINESE PISTACHE	PISTACIA CHINENSIS	INTERIOR PARKING CORRIDOR ZONES
●	7	DATE PALM	PHOENIX CANARIENSIS	ENTRY & TERMINUS MARKERS, CENTRAL GREEN
●	8	MEXICAN FAN PALM	WASHINGTONIA ROBUSTA	PASEO AT CENTRAL RESIDENTIAL UNITS
●	9	ITALIAN CYPRESS	CUPRESSUS SEMPERVIRENS	RESIDENTIAL ALLEYWAYS
●	10	CALIFORNIA LILAC	CEANOTHUS RAY HARTMAN	FRONTAGE ALONG STEVENS CREEK
○		EXISTING TREES TO REMAIN	VARIOUS (SEE L.300)	PERIMETER TREES
○		RELOCATED TREE	QUERCUS AGRIFOLIA	RELOCATED TO VARIOUS LOCATIONS AT WEST SIDE
	SHRUBS AND GROUNDCOVERS			
🟩	A	LAWN	BOUTELOUA SPP.	CENTRAL PASEO, CENTRAL GREEN, CORNER PARKS
🟩	B	STORM WATER PLANTINGS	VARIOUS SEDGES, GRASSES, NATIVE PERENNIALS & SHRUBS	THROUGHOUT, SEE CIVIL PLANS
🟩	C	NATIVE / ORNAMENTAL GRASSES	NATIVE AND LOW WATER USE	RESIDENTIAL FRONTS, PERIMETER, THROUGHOUT
🟨	D	NATIVE GROUNDCOVER MIXES	NATIVE GROUNDCOVERS & WILDFLOWERS	WEST BOUNDARY, STEVENS CREEK FRONTAGE
🟧	E	ACCENT PLANTINGS (NATIVE MIXES)	NATIVE AND LOW WATER USE	PLANTERS THROUGHOUT, CENTRAL GREEN

Source: C2K Architecture Inc., November 2018.

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Scale (Feet)

Figure 3-10
Landscape Plan

3.4.1.6 BIRD SAFE DESIGN FEATURES

The proposed project includes bird safe design features to minimize the risk of collisions by nearby or migrating bird species. These design features include reducing large areas of transparent or reflective glass through constructing the building with solid walls with punched and recessed windows, the use of mullions and/or muttons to divide the window size, installation of balcony railings without reflective glass, using fritting or appliques on the retail storefront windows, setting back windows from the façade, and incorporating overhanging roofs and projected balconies that shield the windows from overhead flying birds. The proposed project would also avoid transparent glass skyways, walkways and entryways, free-standing transparent glass walls, and transparent building corners. Landscaping features that would increase bird safety would be the avoidance of funneling open space toward a building façade and adding landscaping that would reduce reflections and views of foliage through glass. Lighting features such as reduced or eliminated up-lighting and spotlights on buildings and turning off non-emergency lighting at night would be incorporated to increase bird safety on and in the vicinity of the project site.

3.4.1.7 ACCESS AND CIRCULATION

The proposed project would have one access point from Stevens Creek Boulevard and three access points from Mary Avenue. See Figure 3-4. The below-grade parking at Residential-Retail Building 1 would be accessed from the central access point on Mary Avenue. A series of internal roadways, sidewalks, and bike lanes would provide access to the proposed buildings. In addition to the on-site internal sidewalks, the proposed project would also include off-site sidewalk modifications along Stevens Creek Boulevard and Mary Avenue.

The proposed project would include the following on- and off-site improvements that are consistent with the recommendations in the 2016 *Bicycle Transportation Plan* (2016 Bike Plan):[28]

- **Class I Bike Path.** The proposed project would install an on-site Class I bike path on the western portion of the project site that would connect to Stevens Creek Boulevard to the south and Mary Avenue to the north.
- **Class IV Separated Bikeway.** The proposed project would upgrade the bike lane on Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp from an Enhanced bike lane to a Class IV separated bikeway. The proposed project would reconfigure the existing westbound right turn movement from Stevens Creek Boulevard onto the northbound SR-85 on ramp to accommodate the proposed Class IV separated bikeway. The proposed project would include a signal control for the westbound right turn movement, the cars would have a continuous green right-turn arrow until a cyclist or pedestrian arrives and activates the proposed pedestrian or bike crossing signal, at which time a red right-turn arrow would stop the cars. This pedestrian/bicycle signal call could only occur on the east-west signal phasing plan of the intersection when there are no other conflicting movements with the pedestrian and/or bicycle phase. This reconfiguration would convert the existing westbound "free" right turn lane to a signal controlled right turn movement to allow for an exclusive, protected phase for pedestrians and cyclists to cross the on-ramp leg.

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[28] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-7, Bikeway Projects, page 3-8.

- **Bridge.** The proposed project would include public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue.

The proposed project would include a total of 117 bicycle parking spaces,[29] consisting of five Class 1 facilities for retail uses, 18 Class 2 facilities for retail uses, 78 Class 1 facilities for residential uses, and 16 Class 2 facilities for residential uses. Bike facilities would be located adjacent to Buildings 1 and 2, in addition to within the proposed buildings.

The proposed project would also install a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. The precise design-level details would need to be coordinated with VTA and City of Cupertino Public Works Department. For this EIR, it is assumed the bus stop would include a concrete bus pad and bus shelter.

3.4.1.8 UTILITIES AND SERVICE CONNECTIONS

Wastewater

The Cupertino Sanitary District (CSD) maintains approximately 194.5 miles of sewer mains including the infrastructure in the vicinity of the project site.[30] The collected wastewater from the CSD service area is conveyed to the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP) through mains and interceptor lines shared with both the cities of San José and Santa Clara. The proposed project would connect to existing sanitary sewer lines in Stevens Creek Boulevard and Mary Avenue.

The CSD is one of five tributary agencies that have a contractual treatment allocation agreement with the SJ/SCWPCP. The CSD has a contractual treatment allocation with the SJ/SCWPCP of 7.85 million gallon per day (mgd), on average. CSD wastewater flow to the SJ/SCWPCP was 5.3 mgd at the time of the General Plan EIR.[31] The CSD wastewater system also flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara is 13.8 mgd during peak wet weather flows. The existing CSD peak wet weather flow into the Santa Clara system is modeled at 13.29 mgd.[32] Based on the May 2007 *City of Santa Clara Sewer Capacity Assessment*, the estimated wastewater generation rate for residential uses is 133 gallons per day (gpd) per unit, and 0.3 gpd per square foot of retail space. Applying this generation rate, the proposed 242 residential units and 20,000 square feet of retail space would generate up to 38,186 gpd or approximately 0.0382 mgpd of wastewater. The approximately 71,250 square-foot shopping center currently generates about 21,376 gpd or 0.0213 mgd. Therefore, the net increase for the proposed project is 16,810 gpd or 0.0168 mgd.[33]

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[29] Class 1 bicycle parking spaces include bicycle lockers or secure rooms and Class 2 bicycle parking spaces are publicly accessible bicycle racks.

[30] Cupertino Sanitary District, 2016, Sewer Management Plan, page 23.

[31] City of Cupertino General Plan (Community Vision 2015–2040, Appendix B: Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93.

[32] Mark Thomas, Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara, February 20, 2019.

[33] 38,186 gpd proposed generation – 21,376 gpd existing generation = 16,810 gpd (or 0.0168 mgd) net increase.

Water Supply

The San José Water Company (SJWC) provides groundwater, imported treated water, and local surface water for an area of approximately 139 square miles including the project site. The proposed project would connect to existing water lines in Stevens Creek Boulevard and Mary Avenue and would not encroach on undisturbed areas. The 2015 *Urban Water Management Plan* for the Santa Clara Valley Water District (SCVWD), which includes the area for the project site, states that there is sufficient water for SCVWD customers for normal, single-dry, and multiple-dry years until 2025. The SCVWD identifies actions within the water shortage contingency plan that would ensure water demand is met through 2040.[34] The proposed project would use approximately 37 acre-feet per year at buildout and is accounted for in the SJWC's anticipated future customer demands.[35]

Stormwater Management

The City of Cupertino Department of Public Works is responsible for the design, construction, and maintenance of City-owned facilities including public streets, sidewalks, curb, gutter, and storm drains. The capacity of the storm drain facilities within the City of Cupertino was evaluated and documented in the 2018 *Storm Drain Master Plan*, which identifies the areas within the system that do not have the capacity to handle runoff during the 10-year storm event, which is the City's design standard. As described in the 2018 *Storm Drain Master Plan*, the project site is located in an area where the storm drains do not have sufficient capacity to convey water from a 10-year storm. The lines along Steven Creek Boulevard, to the south, and Mary Avenue, to the northeast, are currently under capacity and designated as low priority for replacement.[36]

The proposed project is required to comply with the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) C.3 requirements, which include the minimization of impervious surfaces, measures to detain or infiltrate runoff from peak flows to match pre-development conditions, and agreements to ensure that the stormwater treatment and flow control facilities are maintained in perpetuity. The proposed project also would comply with CMC Chapter 9.18, Stormwater Pollution Prevention and Watershed Protection, which regulates and implements certain requirements of the National Pollutant Discharge Elimination System permit issued to the City of Cupertino.

The proposed project would reduce the total amount of impervious surface from 307,444 square feet to 247,222 square feet which would reduce the peak flows into the storm drain system. Because the proposed project would include a total of 247,222 square feet of impervious surfaces, the proposed project would be required to include 10,268 square feet of bioretention areas (i.e., stormwater treatment

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[34] Santa Clara Valley Water District, 2015, *2015 Urban Water Management Plan,* http://www.valleywater.org/uploadedFiles/Services/CleanReliableWater/WaterSupplyPlanning/Urban_Water_Managment_Plan/SCVWD%202015%20UWMP-Report%20Only.pdf, accessed on June 11, 2019.

[35] Tully & Young Comprehensive Water Planning, May 2018, Water Supply Evaluation for The Oaks Development in Cupertino.

[36] Schaaf & Wheeler Consulting Civil Engineers, 2018, Cupertino Storm Drain Master Plan.

areas).[37] The proposed project includes 10,320 square feet of bioretention areas, which is 52 square feet more than the required amount. See Figure 3-11. The bioretention areas would be incorporated into the landscaped areas throughout the project site. The proposed bioretention areas would provide treatment of site runoff and would further reduce peak flows prior to discharge to the City's storm drain system which would alleviate the existing storm drain capacity deficiency.

Solid Waste

The proposed project would be served by the solid waste collection service provider and landfill that the City maintains contracts with. Currently the City contracts with Recology to provide solid waste collection services to residents and businesses in the city and Newby Island Sanitary Landfill until 2023. The Newby Island Sanitary Landfill has a permitted daily disposal capacity of 4,000 tons per day. In addition to the Newby Island Landfill, solid waste generated in Cupertino can be disposed of at the Altamont Landfill and Resource Recovery facility, the Corinda Los Trancos Landfill, Forward Landfill Inc., Guadalupe Sanitary Landfill, Kirby Canyon Recycling and Disposal Facility, the Monterey Peninsula Landfill, Recology Hay Road, the Vasco Road Sanitary Landfill, the Zanker Material Processing Facility, and the Zanker Road Class III Landfill.

The proposed project would include the management of waste, recycling, and composting from the residential and retail land uses. Solid waste generated by construction of the proposed project would largely consist of demolition waste from the existing buildings as well as construction debris. The proposed project would comply with CMC Chapter 16.72, Recycling and Diversion of Construction and Demolition Waste, and the City's Zero Waste Policy, which requires the recycling or diversion at least 65 percent of all generated construction and demolition (C&D) waste by salvage or by transfer to an approved facility. Prior to permit issuance, the applicant would submit a properly completed Waste Management Plan, which includes the estimated maximum amount of C&D waste that can feasibly be diverted, which facility would handle the waste, and the total amount of C&D waste that would be landfilled. Based on the population and employment generation discussed below in Section 3.4.3, the 695 new residents and the 70 new employees (which is 65 fewer than the number of employees currently on site) would generate approximately a net increase of 2,255 pounds per day (PPD) or 1.12 tons per day (TPD).[38]

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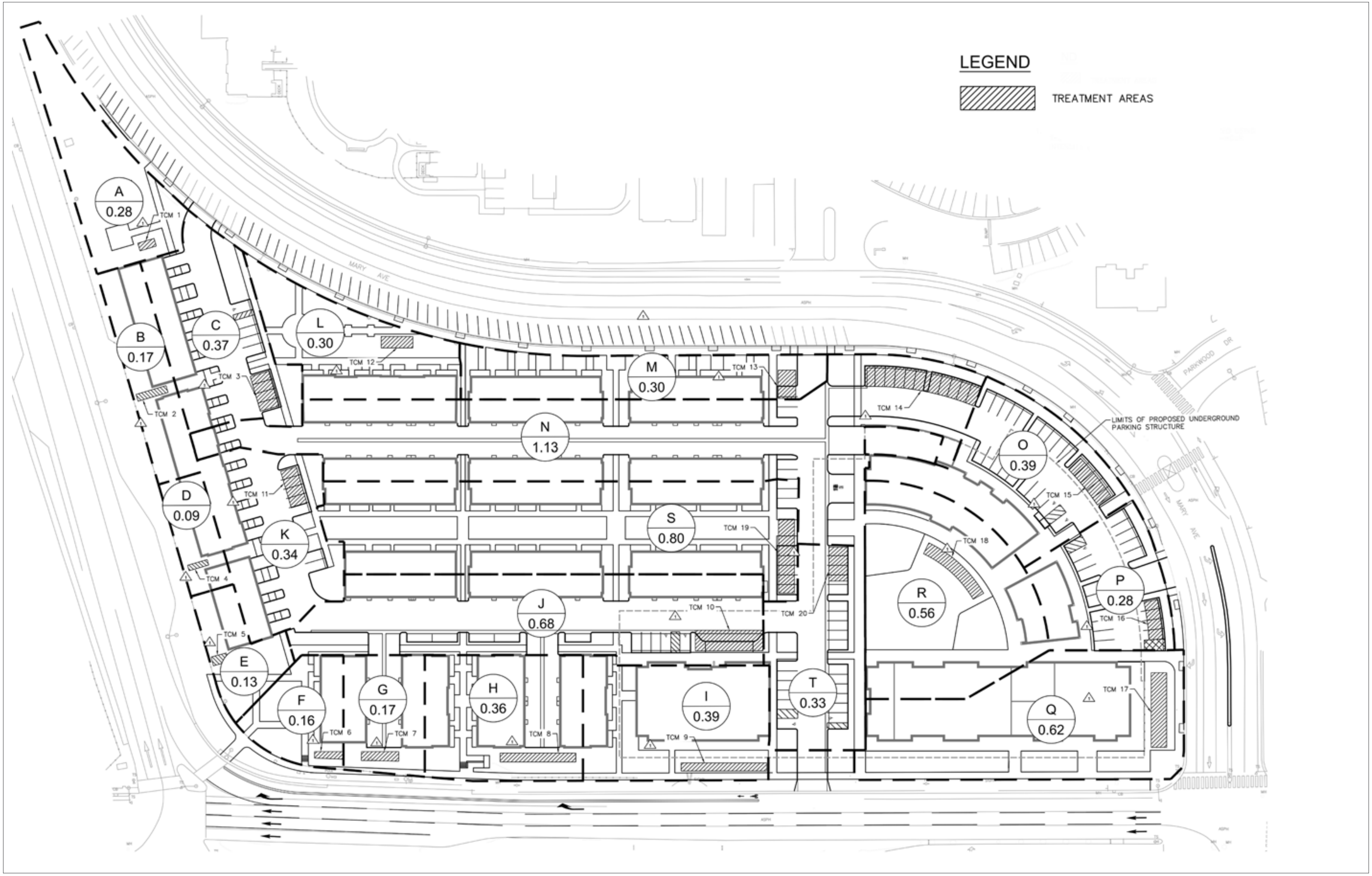
[37] Santa Clara Valley Water District Municipal Regional Stormwater NPDES Permit C.3 requires 4 percent of the proposed impervious surface to be treated to control the flow of stormwater and stormwater pollutants from new development, http://www.scvurppp-w2k.com/pdfs/1516/c3_handbook_2016/SCVURPPP_C.3_Technical_Guidance_Handbook_2016_Chapters.pdf.

[38] (Proposed Project (4.1 PPD x 70 employees = 287 PPD) + (3.6 PPD x 695 residents = 2,502 PPD) = 2,789 PPD) minus (Existing Conditions (4.1 PPD x 135 employees = 533.5 PPD) = 2,255 PPD.



Source: C2K Architecture Inc., November 2018.

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Scale (Feet)

Figure 3-11
Stormwater Treatment Plan

Other Utility Facilities

Other utility facilities that serve the project site are electric power, natural gas, and telecommunications facilities. Pacific Gas & Electric (PG&E) would supply natural gas service and infrastructure and electricity infrastructure to the project site. Silicon Valley Clean Energy would provide electricity to the project site. AT&T and other providers would provide telephone service. Cable television service would be available from a number of providers, including Comcast. The project site is located in a portion of the city that has access to existing infrastructure and services. The proposed project would include appropriate on-site infrastructure to connect to the existing PG&E and telecommunication systems and would not require new off-site facilities and distribution infrastructure or capacity enhancing alterations to any existing facilities.

Energy

The current project site is served by both electricity and natural gas connections. Electricity is supplied to the project site via infrastructure maintained by Pacific Gas & Electric (PG&E). Silicon Valley Clean Energy (SVCE), a locally controlled public agency that has a partnership with PG&E, supplies the electricity to the project site. Natural gas and associated infrastructure are provided and maintained by PG&E. The nearest PG&E substation to the project site is the Stelling Substation on North Stelling Road approximately 1 mile northeast of the project site. The nearest electricity transmission lines to the project site are located south of the project site along Stevens Creek Boulevard.[39] The proposed project would require the construction or installation of new infrastructure and capacity enhancing alterations to existing on-site facilities to connect the new buildings to water, stormwater, sanitary sewer, electricity, and natural gas lines. Construction activities use energy from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. The operation of the proposed mixed-use and residential buildings would use energy for cooling, heating, lighting, and landscape equipment, and for vehicle trips to and from the commercial building.

The proposed mixed-use and residential buildings would be required to meet the 2019 Building and Energy Efficiency Standards of the California Public Resources Code, Title 24, Part 6, which takes effect on January 1, 2020, and applies to any project that is proposed to begin construction on or after August 2020. The 2019 Building Energy Efficiency Standards improve upon the 2016 Standards and require 53 percent or more and 30 percent or more energy efficiency for residential and non-residential buildings, respectively.[40] As described above in Section 3.1.4.2, Zoning, the City enforces the CalGreen Building Standards, which establish planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), in CMC Chapter 16.58, Green Building Standards Code Adopted. CMC Chapter 16.58, Section 16.58.220, Table 101.10 requires that non-residential new construction under 25,000 square feet shall achieve a minimum green building requirement of CALGreen Building Code pursuant to Chapter 5 of the California Green Building Standards

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[39] California Energy Commission (CEC), 2012, October 25, Local Reliability Maps for 2013: Enlargement Maps, http://www.energy.ca.gov/maps/infrastructure/3part_enlargements.html, accessed on June 11, 2019.

[40] California Energy Commission, March 2018, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed on June 11, 2019.

Code. CMC Chapter 16.58, Section 16.58.220, Table 101.10 also requires that residential new construction exceeding nine homes shall achieve a minimum green building requirement of GPR certified at minimum 50 points, Leadership in Energy and Environmental Design (LEED) Silver, or an alternate green building standard that is as stringent as LEED or other cited standards and is subject to third party verification.

Energy conserving features of the proposed project would include new landscaping that is native and/or adaptive, and drought resistant to conserve water and subsequently energy. Where glass features are considered, the proposed project would use non-reflective or “fritted glass” and opaque spandrel panels, in addition to incorporating overhanging roofs, projecting balconies, and set back facades that would reduce direct sunlight and reduce cooling costs.

3.4.2 CONSTRUCTION, DEMOLITION, AND SITE PREPARATION

Construction of the proposed project would occur in two phases over a 16-month period and is anticipated to be completed by the year 2023. See Figure 3-12. The proposed project would involve demolition of existing structures and parking stalls, and the removal of the existing landscaping on site, with the exception of four oak trees which will be relocated on the project site as shown in Figure 3-10. Site preparation would include export of 69,000 cubic yards of soil. No soil import would occur. Demolition debris, including soil from excavation, would be off hauled for disposal at the Zanker Materials Recovery and Landfill in San José, which is approximately 15 miles from the project site. Phase 1 would include the construction of Residential-Retail Buildings 1 and 2, as well as the underground parking garage on the eastern portion of the site. Phase 2 would include the construction of the rowhouses and townhouses on the western portion of the project site.

3.4.3 POPULATION AND EMPLOYMENT PROJECTIONS

As previously described, the Westport project site is identified as a Priority Housing Element Site in the City of Cupertino General Plan (Community Vision 2015-2040) to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 to 2022 planning period and meet its fair-share housing obligation of 1,064 units.[41] There are no existing residential units on site. Therefore, based on an average household size of 2.87 persons,[42] the proposed project would generate 695 new residents.[43] The project site has 71,250 square feet of existing retail uses that are currently 85 percent occupied. Using the generation rates applied in the General Plan EIR, the existing uses generate 135 employees.[44] The proposed project would generate 45 employees for the proposed retail uses[45] and a full service staff of 25 employees including leasing agents, security staff, and maintenance personnel, would be present on site to manage the property for a total of 70 employees. Accordingly, the proposed project would have a net decrease of

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[41] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 4, Housing Element, Table HE-5: Summary of Priority Housing Element Sites to Meet the RHNA - Scenario A, page HE-18.

[42] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 projections of the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino.

[43] 242 new units multiplied by 2.87 persons per unit equals 695 new residents.

[44] 85 percent of 71,250 square feet (about 60,560 square feet) of retail divided by 450 square feet per employee equals 135 employees

[45] 20,000 square feet of retail divided by 450 square feet per employee equals 45 employees.

65 employees. It is anticipated that future residents and employees would be drawn largely from Cupertino and other communities in the San Francisco Bay Area.

3.4.4 REQUIRED PERMITS AND APPROVALS

Following certification of the Final EIR and the approval of the proposed project by the Planning Commission, the following discretionary permits and approvals from the City would be required for the proposed project:

- Development Permit
- Architectural and Site Approval Permit
- Use Permit
- Subdivision Map Permit
- Heart of the City Exception
- Tree Removal Permit

Encroachment permits from the City and Caltrans would also be required as well as design review and approval for the proposed bus stop by the VTA.

As part of the Development Permit, the proposed project is requesting a Density Bonus of 5 units pursuant to State Law as incorporated into the City's Housing Element[46] and CMC.[47] Pursuant to Density Bonus law, the applicant is also requesting waivers of development standards for height, slope setbacks, and the location of senior housing that the developer states would have the effect of physically precluding the development of the proposed project at the density proposed. In addition, permits for demolition, grading and building, and the certificate of occupancy would be required from the City.

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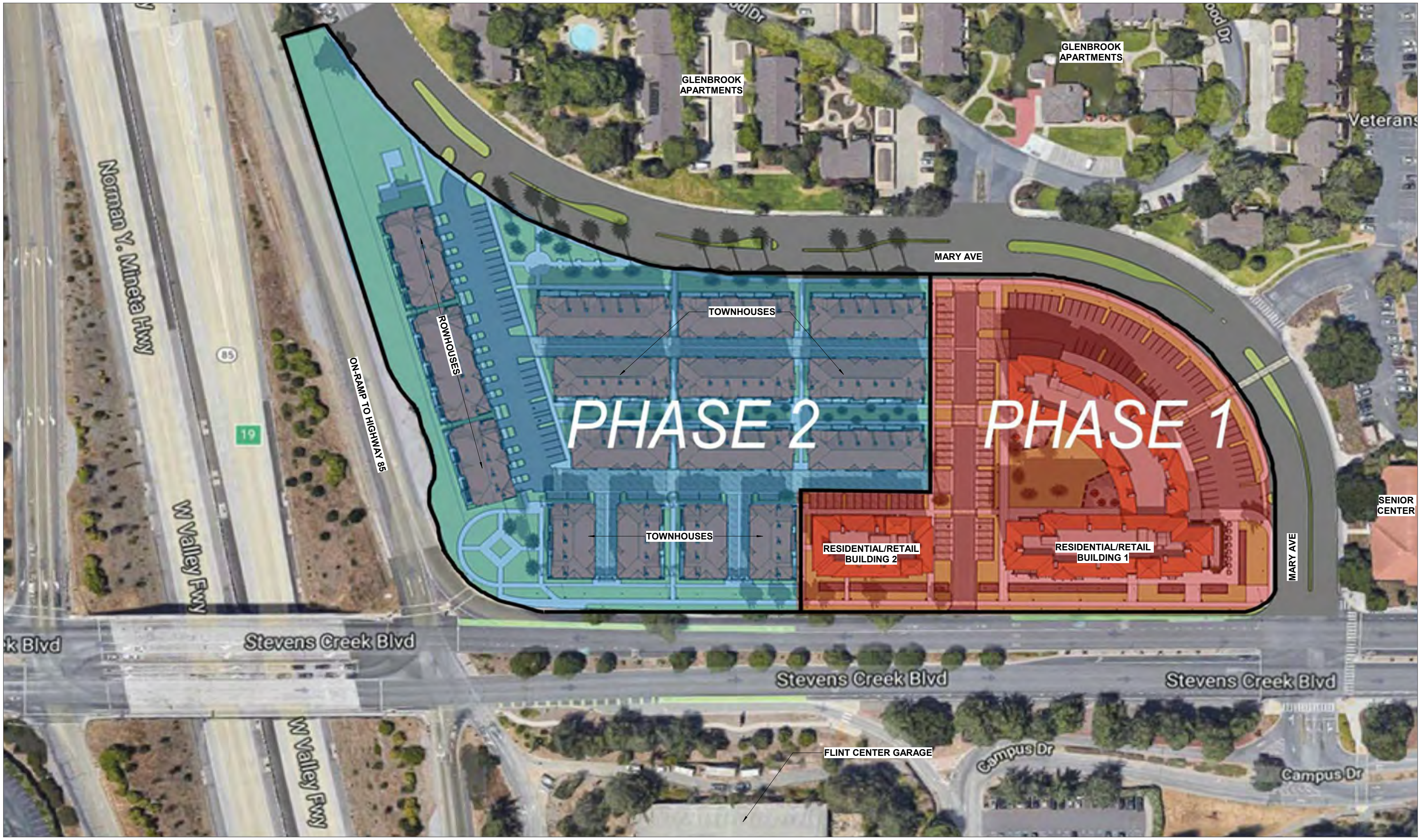
[46] City of Cupertino Housing Element Strategy HE-2.3.7 (Density Bonus Ordinance), page H-29.

[47] City of Cupertino Municipal Code, Title 19, Zoning, Chapter 19.56 Density Bonus, Sections 19.56.030, Density Bonus, and 19.56.040, Incentives or Concessions, Waivers and Reduction of Parking Standards.



Source: C2K Architecture Inc., November 2018.

0 200
Scale (Feet)

Figure 3-12

Construction Phasing Plan

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4. Environmental Evaluation

4.1 CHAPTER ORGANIZATION

This chapter of the Draft EIR is made up of nine sub-chapters, which evaluate the direct, indirect, and cumulative environmental impacts of the proposed project. The following sections describe the format of the environmental analysis, the thresholds of significance, and the methodology of the cumulative impact analysis.

4.2 FORMAT OF THE ENVIRONMENTAL ANALYSIS

Each sub-chapter is organized into the following sections:

- **Environmental Setting** provides a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared, and an overview of federal, State, regional, and local laws and regulations relevant to each environmental issue.
- **Thresholds of Significance** refer to the quantitative or qualitative standards, performance levels, or criteria used to compare the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines Appendix G, Environmental Checklist, and also may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.
- **Impact Discussion** gives an overview of the potential impacts of the proposed project and explains why impacts were found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts of the proposed project. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronymic or abbreviated reference to the impact section. The environmental effects of the proposed project are analyzed for potential significant impacts in the following environmental issue areas, which are organized with the listed abbreviations:
    - Air Quality (AQ)
    - Biological Resources (BIO)
    - Cultural and Tribal Cultural Resources (CULT)
    - Geology and Soils (GEO)
    - Greenhouse Gas Emissions (GHG)
    - Hazards and Hazardous Materials (HAZ)
    - Noise (NOISE)
    - Transportation (TRANS)
    - Utilities and Service Systems (UTIL)

4.3 INCORPORATION BY REFERENCE

All documents cited or referenced are incorporated into the Draft EIR in accordance with CEQA Guidelines Sections 15148 and 15150, including but not limited to the City of Cupertino General Plan (Community Vision 2015-2040).[1] In each instance where a document is incorporated by reference for purposes of this report, the Draft EIR will briefly summarize the incorporated document or briefly summarize the incorporated data if the document cannot be summarized. In addition, the Draft EIR will explain the relationship between the incorporated part of the referenced document and the Draft EIR.

This Draft EIR also relies on previously adopted regional and statewide plans and programs, agency standards, and background studies in its analyses, such as the Bay Area Air Quality Management District's (BAAQMD) air quality management plan. Subchapters 4.1 to 4.9 of Chapter 4 of this Draft EIR include references to all documents utilized in preparing this Draft EIR. All of the documents that are not published that are incorporated by reference are available for review at the City of Cupertino Community Development Department at 10300 Torre Avenue, Cupertino, California 95014.

4.4 THRESHOLDS OF SIGNIFICANCE

As stated above, the significance criteria are identified before the impact discussion subsection, under the subsection, "Thresholds of Significance." For each impact identified, a level of significance is determined using the following classifications:

- *Significant (S)* impacts include a description of the circumstances in which an established or defined threshold would be exceeded.
- *Less-than-significant (LTS)* impacts include effects that are noticeable, but do not exceed established or defined thresholds, or are mitigated below such thresholds.
- *No impact* describes the reasons that the project would have no adverse effect on the environment.

For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant level successfully, this is stated in the EIR. However, significant and unavoidable (SU) impacts are described where mitigation measures would not diminish these effects to less-than-significant levels.

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[1] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

4.5 CUMULATIVE IMPACT ANALYSIS

A cumulative impact consists of an impact created as a result of the combination of the proposed project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

When the combined cumulative impact caused by the project's incremental effect and the effects of other projects is not significant (i.e., not cumulatively considerable), the EIR must briefly indicate why the cumulative impact is not significant.

The cumulative impacts discussions in sub-chapters 4.1 through 4.9 explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, city, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing noise-related impacts, the pertinent geographic study area is the vicinity of the area of proposed new development within which the new development can be heard and may contribute to a significant cumulative noise impact. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect.

The CEQA Guidelines Section 15130 provides for two approaches to analyzing cumulative impacts. The first is the "list of projects" approach, which is based on a list of past, present and probable future projects producing related or cumulative impacts. The second is the "summary of projections" approach, which is based on a summary of projections contained in an adopted local, regional or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect. A reasonable combination of the two approaches may also be used.

The cumulative impact analysis in this Draft EIR relies on a projections approach supplemented by the list of projects approach that, when considered with the effects of the proposed project, may result in cumulative effects.

Table 4-1 shows the other reasonably foreseeable projects in Cupertino and how they relate to the maximum buildout potential evaluated in the General Plan EIR.

ENVIRONMENTAL EVALUATION

TABLE 4-1 REASONABLY FORESEEABLE DEVELOPMENT PROJECTS IN CUPERTINO

	Hotel	Residential	Commercial	Office
General Plan EIR: Maximum Development Potential	1,339	4,421	1,343,679	4,040,231
Reasonably Foreseeable Projects				
Foothill Apartments[a]		*15*		
Marina Plaza[a]	*122*	*188*	*23,000*	
The Hamptons Redevelopment[a]		*600*		
The Forum[a]		*23*		
De Anza Hotel[b]	*156*			
The Village Hotel[b]	*185*			
Public Storage[a, d]			*209,485*	
Loc-N-Stor[b,d]			*96,432*	
Canyon Crossings[b]		*18*	*4,536*	
Vallco[a,c]		*2,402*	*400,000*	*1,810,000*
Total Foreseeable Development	***463***	***3,219***	***748,917***	***1,810,000***
General Plan EIR: Remaining Development Potential	876	1,202	594,762	2,230,231

Notes:
a. The project has been approved.
b. The project is under review.
c. The buildout numbers are for the Vallco SB 35 Application (0 hotel rooms, 2,402 units, 1,810,000 square feet commercial, and 400,000 square feet commercial).
d. The storage facility sites currently have existing storage facilities and the square footage shown in this table is the net new.
Source: City of Cupertino, 2019.

The General Plan EIR evaluated the cumulative effects of the General Plan Amendments, Housing Element Update, and Associated Rezoning using the summary of projections approach provided for in CEQA Guidelines Section 15130(b)(1)(B). The General Plan EIR took into account growth from the General Plan within the Cupertino city boundary and Sphere of Influence (SOI), in combination with projected growth in the rest of Santa Clara County and the surrounding region, as forecast by ABAG. As shown in Table 4-1, the proposed project when combined with the other reasonably foreseeable projects in Cupertino, would not exceed the maximum buildout potential evaluated in the General Plan EIR.

With respect to projections, this EIR relies on the estimated growth in the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP) service area for the analysis of cumulative impacts to water supply and wastewater generation and treatment capacity.

4.1 AIR QUALITY

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) it was determined that construction and operation of the proposed project would not result in significant environmental impacts related to odors or other emissions. Therefore, this chapter includes an evaluation of the potential environmental consequences associated with the potential obstruction of an air quality plan, cumulatively considerable net increases in criteria pollutants, and the exposure of sensitive receptors to substantial pollution concentrations. This chapter also describes the environmental setting, including the air pollutants of concern, regulatory framework and the existing air quality setting, which is the San Francisco Bay Area Air Basin, and baseline conditions, and identifies mitigation measures that would avoid or reduce significant impacts.

The analysis in this chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the proposed project. In this chapter, “emissions” refers to the actual quantity of pollutant material measured in pounds per day or tons per year, and “concentrations” refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).

The analysis in this chapter is based in part on the *Air Quality Assessment for the proposed Westport Project, in the City of Cupertino, California*, dated July 2019, prepared by Kimley-Horn and Associates. A complete copy of this report is located in Appendix C, Air Quality Assessment, of this Draft EIR. A third-party peer review of this report was completed by PlaceWorks.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants.

Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NOx in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 4.1-1.

TABLE 4.1-1 AIR CONTAMINANTS AND ASSOCIATED PUBLIC HEALTH CONCERNS

Pollutant	Major Man-made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[a] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

Notes:

a. VOCs or ROG are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association, *Health Effects*, http://www.capcoa.org/health-effects/, Accessed April 10, 2018.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

Diesel Particulate Matter

The California Air Resources Board (CARB) has identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy- or light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their small size, these particles can be inhaled and trapped in the bronchial and alveolar regions of the lung.

4.1.1.2 REGULATORY FRAMEWORK

Land use in the city is subject to the rules and regulations to protect air quality imposed by the United States Environmental Protection Agency (USEPA), CARB, the California Environmental Protection Agency (CalEPA) and BAAQMD. The regulatory framework applicable to the proposed project is summarized below.

Federal

Ambient Air Quality Standards

Air quality is federally protected by the Clean Air Act and its amendments. Under this Act, the USEPA developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for criteria air pollutants including ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb). The health-based ambient air quality standards established by the State and the federal government are shown in Table 4.1-2.

The Clean Air Act also requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines. The USEPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the Clean Air Act. If a state fails to correct these planning deficiencies within two years of federal notification, the USEPA is required to develop a federal implementation plan for the identified nonattainment area or areas. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements.

TABLE 4.1-2 AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS

		State Standards [a]		Federal Standards [b]	
Pollutant	Averaging Time	Concentration	Attainment Status	Primary [c]	Attainment Status
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	N[i]	N/A	N/A[e]
	8 hour	0.070 ppm (137 µg/m^3)	N	0.070 ppm	N[d]
Carbon Monoxide (CO)	8 hour	9.0 ppm (10 µg/m^3)	A	9 ppm (10 µg/m^3)	A
	1 hour	20 ppm (23 µg/m^3)	A	35 ppm (40 µg/m^3)	A[f]
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm (339 µg/m3)	A	0.10 ppm[k]	U
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	-	0.053 ppm (100 µg/m^3)	A
Sulfur Dioxide (SO_2)[l]	24 hour	0.04 ppm (105 µg/m^3)	A	0.14 ppm (365 µg/m^3)	A
	1 hour	0.25 ppm (655 µg/m^3)	A	0.075 ppm (196 µg/m^3)	A
	Annual Arithmetic Mean	NA	-	0.03 ppm (80 µg/m^3)	A
Particulate Matter (PM_{10})	24 hour	50 µg/m^3	N	150 µg/m^3	-
	Annual Arithmetic Mean	20 µg/m^3	N[g]	NA	U
Fine Particulate Matter ($PM_{2.5}$) [j, o]	24 hour	NA	-	35 µg/m^3	U/A
	Annual Arithmetic Mean	12 µg/m^3	N[g]	12 µg/m^3	N
Sulfates ($SO_{4\ 2}$)	24 hour	25 µg/m^3	A	NA	-
Lead (Pb)[m, n]	30-Day Average	1.5 µg/m^3	-	NA	A
	Calendar Quarter	NA	-	1.5 µg/m^3	A
	Rolling 3-Month Average	NA	-	0.15 µg/m^3	-
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (0.15 µg/m^3)	U	N/A	-
Vinyl Chloride (C_2H_3Cl)	24 hour	0.01 ppm (26 µg/m^3)	-	N/A	-
Visibility Reducing Particles[h]	8 hour (10:00 am to 6:00 pm PST)	-	U	-	-

Notes: A = attainment; N = nonattainment; U = unclassified; ppm = parts per million; µg/m3 = micrograms per cubic meter; mg/m3 = milligrams per cubic meter; – = not applicable, not indicated, or no information available.

a. California standards for O_3, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe CO, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

b. National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m^3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.

c. National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

d. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. The USEPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

TABLE 4.1-2 AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS

		State Standards [a]		Federal Standards [b]	
Pollutant	Averaging Time	Concentration	Attainment Status	Primary [c]	Attainment Status

e. The national 1-hour ozone standard was revoked by EPA on June 15, 2005.
f. In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
g. In June 2002, CARB established new annual standards for PM$_{2.5}$ and PM$_{10}$.
h. Statewide Visibility Reducing Particles Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
I. The 8-hour State ozone standard was approved by CARB on April 28, 2005 and became effective on May 17, 2006.
j. On January 9, 2013, the USEPA issued a final rule to determine that the Bay Area attains the 24-hour PM$_{2.5}$ national standard. This USEPA rule suspends key State Implementation Plan requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this USEPA action, the Bay Area will continue to be designated as “non-attainment” for the national 24-hour PM$_{2.5}$ standard until such time as the Air District submits a “redesignation request” and a “maintenance plan” to USEPA, and USEPA approves the proposed redesignation.
k. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The USEPA expects to make a designation for the Bay Area by the end of 2017.
L. On June 2, 2010, the USEPA established a new 1-hour SO$_2$ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO$_2$ NAAQS however must continue to be used until one year following USEPA initial designations of the new 1-hour SO$_2$ NAAQS.
m. CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure below which there are no adverse health effects determined.
n. National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
o. In December 2012, USEPA strengthened the annual PM$_{2.5}$ NAAQS from 15.0 to 12.0 (µg/m^3). In December 2014, USEPA issued final area designations for the 2012 primary annual PM$_{2.5}$ NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Source: Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, http://www.baaqmd.gov/research-anddata/air-quality-standards-and-attainment-status, accessed April 20, 2018.

State

California Air Resources Board

CARB administers the California Clean Air Act and California Ambient Air Quality Standards (CAAQS) throughout the State. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4.1-2, are generally more stringent and apply to more pollutants than the NAAQS. The CAAQS also have additional standards for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for California.

Regional

Bay Area Air Quality Management District

The BAAQMD is a regional agency with jurisdiction over the nine-county region located in the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD is responsible for assuring that the National and California AAQS are attained and maintained in the SFBAAB. BAAQMD also prepares air quality management plans (AQMP) to attain ambient air quality standards in the SFBAAB. The Association of Bay Area Governments (ABAG) Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations contribute to the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

Under CEQA, the BAAQMD is a commenting responsible agency on air quality within its jurisdiction or impacting its jurisdiction. The BAAQMD reviews projects to ensure that they would: (1) support the primary goals of the latest air quality plan; (2) include applicable control measures from the air quality plan; and (3) not disrupt or hinder implementation of any AQMP control measures.

2017 Clean Air Plan

The 2017 *Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) was adopted on April 19, 2019, by the BAAQMD. The 2017 Clean Air Plan provides a regional strategy to protect public health and the climate. The 2017 Clean Air Plan describes how the BAAQMD will continue progress toward attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. The 2017 Clean Air Plan also defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG) reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease the emission of air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Local

Cupertino General Plan

The Cupertino General Plan (Community Vision 2015-2040), includes policies that are relevant to air quality and applicable to the proposed project. The policies are primarily identified in General Plan Chapter 6, Environmental Resources and Sustainability, and are listed in Table 4.1-3.

TABLE 4.1-3 GENERAL PLAN POLICIES RELEVANT TO AIR QUALITY

Policy Number	Policy
Chapter 6, Environmental Resources and Sustainability (ES)	
Policy ES-3.1	**Green Building Design.** Set standards for the design and construction of energy and resource conserving/efficient building.
Policy ES-4.1	**New Development.** Minimize the air quality impacts of new development projects and air quality impacts that affect new development.
Policy ES-4.3	**Use of Open Fires and Fireplaces.** Discourage high pollution fireplace use.

Source: Cupertino General Plan (Community Vision 2015-2040).

Cupertino Municipal Code

The Cupertino Municipal Code (CMC) includes various directives to minimize adverse impacts to air quality. The provisions related to potential impacts from the proposed project are included in Title 19, Zoning, as follows:

- **Chapter 19.80, Planned Development Zones.** This chapter provides regulations for guiding land development or redeveloping in the city, that is uniquely suited for planning coordination of land uses and flexibility of land use intensity and design. The planned development zoning district designates Priority Housing Development Sites as permitted uses, or conditional uses if they exceed the number of units designated for the specific Priority Development Site.

4.1.1.3 EXISTING CONDITIONS

Climate and Meteorology

CARB divides the State into 15 air basins that share similar meteorological and topographical features. The proposed project is located within the San Francisco Bay Area Air Basin also known as the SFBAAB. The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. The city of Cupertino is located in the Santa Clara Valley climatological subregion of the SFBAAB, which is bounded by the San Francisco Bay to the north and by mountains to the east, south, and west. Air quality in this area is determined by natural factors, which are discussed below.

Wind Patterns

Winds in the Santa Clara Valley are influenced by the terrain, resulting in a prevailing flow that roughly parallels the Santa Clara Valley's northwest-southeast axis. A north-northwesterly sea breeze flows through the valley during the afternoon and early evening, and a light south-southeasterly drainage flow occurs during the late evening and early morning. In the summer the southern end of the valley sometimes becomes a "convergence zone," when air flowing from the Monterey Bay gets channeled northward into the southern end of the Santa Clara Valley and meets with the prevailing north-northwesterly winds. Wind speeds are greatest in the spring and summer and weakest in the fall and winter. Nighttime and early morning hours frequently have calm winds in all seasons, while summer afternoons and evenings are quite breezy. Strong winds are rare, associated mostly with the occasional winter storm.

Temperature

Temperatures are warm on summer days and cool on summer nights, and winter temperatures are fairly mild. At the northern end of the Santa Clara Valley, mean maximum temperatures are in the low 80s during the summer and the high 50s during the winter, and mean minimum temperatures range from the high 50s in the summer to the low 40s in the winter. Further inland, where the moderating effect of the San Francisco Bay is not as strong, temperature extremes are greater. For example, in San Martin, located 27 miles south of the San José Airport, temperatures can be more than 10 degrees warmer on summer afternoons and more than 10 degrees cooler on winter nights.

Precipitation

The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys. During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.

Wind Circulation and Inversions

The air pollution potential of the Santa Clara Valley is high. High summer temperatures, stable air, and mountains surrounding the valley combine to promote ozone formation. In addition to the many local sources of pollution, ozone precursors from San Francisco, San Mateo, and Alameda Counties are carried by prevailing winds to the Santa Clara Valley. Pollution sources are plentiful and complex in this subregion. The Santa Clara Valley has a high concentration of industry at the northern end, in the Silicon Valley. Some of these industries are sources of air toxics as well as criteria air pollutants. In addition, Santa Clara Valley's large population and many work-site destinations generate the highest mobile source emissions of any subregion in the SFBAAB. On summer days with low level inversions, ozone can be recirculated by southerly drainage flows in the late evening and early morning, and by the prevailing northwesterlies in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. The Santa Clara Valley tends to channel pollutants to the southeast. This movement of the air up and down the valley increases the impact of the pollutants significantly.

Attainment Status of the Air Basin

USEPA and CARB designate areas within the State as either attainment or nonattainment for each criteria pollutant, based on whether the AAQS have been achieved. Exceedances affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a standard, and are not used as a basis for designating areas as nonattainment. The SFBAAB attainment status with respect to State standards was summarized previously in Table 4.1-2. The SFBAAB is currently designated a nonattainment area for California and federal O_3, California and federal $PM_{2.5}$, and California PM_{10} AAQS.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest air monitoring station to the project site is the Los Gatos Monitoring Station (located approximately 7.5 miles to the south). Local air quality data from 2014 to 2016 are provided in Table 4.1-4. As the Los Gatos Monitoring Station only collects data for O_3, Table 4.1-4 also includes data from the San Jose-Jackson Street Monitoring station, which is the next closest to the site (located approximately 8.5 miles to the east). Table 4.1-4 lists the monitored maximum concentrations and number of exceedances of federal/State air quality standards for each year.

TABLE 4.1-4 AMBIENT AIR QUALITY MONITORED IN THE PROJECT VICINITY

Pollutant	Los Gatos[a]			San Jose-Jackson Street[b]		
	2015	2016	2017	2015	2016	2017
Ozone (O_3)						
1-hour Maximum Concentration (ppm)	0.100	0.091	0.093	0.094	0.087	0.121
8-hour Maximum Concentration (ppm)	0.084	0.065	0.075	0.081	0.066	0.098
Number of Days Standard Exceeded						
CAAQS 1-hour (>0.09 ppm)	1	0	0	0	0	3
NAAQS 8-hour (>0.070 ppm)	4	0	3	2	0	4
Carbon Monoxide (CO)						
1-hour Maximum Concentration (ppm)	--	--	--	2.43	1.95	1.87
Number of Days Standard Exceeded						
NAAQS 1-hour (>35 ppm)	--	--	--	0	0	0
CAAQS 1-hour (>20 ppm)	--	--	--	0	0	0
Nitrogen Dioxide (NO_2)						
1-hour Maximum Concentration (ppm)	--	--	--	49.3	51.1	67.5
Number of Days Standard Exceeded						
NAAQS 1-hour (>100 ppm)	--	--	--	0	0	0
CAAQS 1-hour (>0.18 ppm)	--	--	--	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10})						
National 24-hour Maximum Concentration	--	--	--	58.8	40.0	69.4
State 24-hour Maximum Concentration	--	--	--	58.0	41.0	69.8
State Annual Average Concentration (CAAQS=20 µg/m^3)	--	--	--	21.9	18.3	21.3
Number of Days Standard Exceeded						
NAAQS 24-hour (>150 µg/m^3)	--	--	--	0	0	0
CAAQS 24-hour (>50 µg/m^3)	--	--	--	1	0	6
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$)						
National 24-hour Maximum Concentration	--	--	--	49.4	22.6	49.7
State 24-hour Maximum Concentration	--	--	--	49.4	22.7	49.7
Number of Days Standard Exceeded						
NAAQS 24-hour (>35 µg/m3)	--	--	--	2	0	6

Notes:

a. Measurements taken at the Los Gatos Monitoring Station located at 306 University Avenue, Los Gatos, California 95030 (CARB# 43380).

b. Measurements taken at the San Jose-Jackson Street Monitoring Station located at 158 East Jackson Street, San Jose, California 95112 (CARB #43383). NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter; NM = not measured

Source: All pollutant measurements are from the California Air Resources Board Aerometric Data Analysis and Management system (iADAM) database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the California Air Resources Board Air Quality and Meteorological Information System (AQMIS) (https://www.arb.ca.gov/aqmis2/aqdselect.php).

Existing Emissions

The project site is developed with an approximately 71,250 square-foot shopping center with retail stores, offices, and restaurants that is currently about 85 occupied (or 60,563 square feet). The site currently generates criteria air pollutant emissions from natural gas use for heating and cooking, vehicle trips associated with the land uses, as well as area sources such as landscaping equipment and consumer cleaning products.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Table 4.1-5 lists the distances and locations of sensitive receptors within the project vicinity based on the distance from the project site to the receptors.

TABLE 4.1-5 AIR QUALITY SENSITIVE RECEPTORS

Receptor Type/Description	Distance and Direction from the Project Site [a]
Residential (Glenbrook Apartments) on Mary Avenue	90 feet north
Single-family residential neighborhood on Anton Way	630 feet northeast
Cupertino Senior Center on Mary Avenue	80 feet east
Cupertino Teen Center and Sports Center on Stevens Creek Boulevard	612 feet east
De Anza College on Stevens Creek Boulevard	140 feet south

Notes:
a Distance calculated from property line of proposed project site and property line of the sensitive receptors
Source: Kimley-Horn and Associates, PlaceWorks, 2019.

4.1.2 THRESHOLDS OF SIGNIFICANCE

4.1.2.1 CEQA GUIDELINES APPENDIX G

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process it was determined that development of the proposed project would not result in significant environmental impacts related to the following significance standard and therefore, is not discussed in this chapter.

- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Based on the Initial Study and comments received during the scoping process it was determined that the proposed project could result in a potentially significant air quality impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.

4.1.2.2 BAAQMD THRESHOLDS

Regional Significance Thresholds

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. In May 2017 the BAAQMD's Board of Directors adopted the CEQA Air Quality Guidelines, including revisions made to the thresholds of significance adopted in 2010. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA.[1]

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

The BAAQMD's criteria for regional significance for projects that exceed the screening thresholds are shown in Table 4.1-6. Criteria for both the construction and operational phases of the proposed project are shown.

TABLE 4.1-6 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

	Construction-Related	Operational-Related	
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (pounds/day)	Average Daily Emission (pounds/day)	Average Daily Emission (pounds/day)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
PM_{10}/$PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average 20.0 ppm (1-hour average)	

Source: Bay Area Air Quality Management District. 2017. CEQA Guidelines May 2017.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (Sierra Club v. County of Fresno [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The BAAQMD CEQA significance thresholds in Table 4.1-6 are based on the trigger

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[1] Bay Area Air Quality Management District (BAAQMD), 2017, May, CEQA Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

levels for the federal New Source Review (NSR) Program and BAAQMD's Regulation 2, Rule 2 for new or modified sources. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health of sensitive populations such as asthmatics, children, and the elderly. Therefore, projects that do not exceed the BAAQMD regional significance thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur.

CO Hotspots

A quantitative CO impact analysis is required by BAAQMD (comparing project emissions to the CAAQS), if none of the following are met:

- Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. The proposed project would generate TACs and $PM_{2.5}$ during construction activities that could elevate concentrations of air pollutants at the nearby residential sensitive receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. The BAAQMD has adopted screening tables for air toxics evaluation during construction.[2] Construction-related TAC and $PM_{2.5}$ impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable.[3] The proposed project involves redevelopment of the project site with a residential mixed-use project and would not be a source of operational TACs and $PM_{2.5}$.

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[2] Bay Area Air Quality Management District (BAAQMD), 2010, Screening Tables for Air Toxics Evaluations during Construction.

[3] Bay Area Air Quality Management District (BAAQMD), 2017, Revised, California Environmental Quality Act Air Quality Guidelines.

Since neither the City of Cupertino nor County of Santa Clara currently have qualified risk reduction plans, a site-specific analysis of TACs and $PM_{2.5}$ impacts on sensitive receptors was conducted. The thresholds identified below are applied to the proposed project's construction and operational phases.

Community Risk and Hazards: Project

Project-level emissions of TACs or $PM_{2.5}$ from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- An excess cancer risk level of more than 10 in one million, or a noncancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant project contribution.
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m^3) annual average $PM_{2.5}$ from a single source would be a significant project contribution.[4]

Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the proposed project, exceeds any of the following:

- An excess cancer risk level of more than 100 in one million or a chronic noncancer hazard index (from all local sources) greater than 10.0.
- 0.8 µg/m3 annual average $PM_{2.5}$.[5]

In February 2015, the Office of Environmental Health Hazard Assessment adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rate.[6]

Air Quality Management Plan Consistency

The BAAQMD's 2017 Clean Air Plan was prepared to accommodate growth, meet State and federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the BAAQMD CEQA Air Quality Guidelines, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the BAAQMD CEQA Air Quality Guidelines states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

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[4] Bay Area Air Quality Management District (BAAQMD), 2017, Revised, California Environmental Quality Act Air Quality Guidelines.

[5] Bay Area Air Quality Management District (BAAQMD), 2017, Revised, California Environmental Quality Act Air Quality Guidelines.

[6] Office of Environmental Health Hazard Assessment (OEHHA), 2015, February, Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.

4.1.3 IMPACT DISCUSSION

4.1.3.1 METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the proposed project. Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with proposed project construction would generate emissions of criteria air pollutants and precursors and toxic air contaminants. Construction-related and operational emissions are evaluated consistent with methodologies outlined in the BAAQMD CEQA Air Quality Guidelines for assessing and mitigating air quality impacts. Emissions associated with the proposed project are estimated using the California Emissions Estimator Model (CalEEMod). The proposed traffic conditions as a result of the proposed project assume full occupancy of the project site based on the transportation analysis prepared by Kimley-Horn and Associates (see Chapter 4.8, Transportation, and Appendix H, Transportation Assessment, of this Draft EIR). The construction health risk assessment was performed using the USEPA AERSCREEN dispersion model.

4.1.3.2 IMPACT ANALYSIS

AQ-1 The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

The primary method of determining consistency with the 2017 Clean Air Plan growth assumptions is consistency with the General Plan land use designations and zoning ordinance designations for the site. Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of the 2017 Clean Air Plan. Because the General Plan was adopted prior to the adoption of the 2017 Clean Air Plan, it can be assumed that the 2017 Clean Air Plan incorporates the growth forecast in the General Plan.

As described in Chapter 3, Project Description, of this Draft EIR, the General Plan describes the vision and standards for future development on the site in the defined Heart of the City Special Area, *Heart of the City Specific Plan*, Oaks Gateway, Priority Housing Element Site A3 (The Oaks Shopping Center), and Commercial/Residential land use designation. In addition, the General Plan identifies the site as being within the regional *Plan Bay Area* Santa Clara Valley Transportation Authority City Cores, Corridors, & Station Areas priority development area (PDA). Furthermore, the site qualifies as a Transit Priority Area (TPA) because it is within one-half mile of a "major transit stop" as defined by CEQA Guidelines Section 15191[7] and the Santa Clara Valley Transportation Authority (VTA).[8]

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[7] "CEQA Guidelines defines a major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[8] The Santa Clara Valley Transportation Authority (VTA) defines a "major bus stop" as a stop where six or more buses per hour stop during the peak period and is also referred to as a "high-quality transit" area.

The West Stevens Creek Boulevard subarea of the *Heart of the City Specific Plan* identifies the primary use for this area to be quasi-public/public facilities, with supporting uses including mixed commercial/residential. The Oaks Gateway is an identified neighborhood center which allows mixed-use development. General Plan Policy LU-14.5 (Oaks Gateway Node) states that the Oaks Gateway is a retail and shopping node and that new residential uses, if allowed, should be designed on the "mixed-use village" concept.[9] The mixed-use urban village concept includes providing parcel assembly, complete site redevelopment, mixed-use village layout with streets, alley, sidewalks, and open spaces, mix of retail uses, public open spaces, and high-quality, pedestrian-oriented design.[10] The proposed project is a residential mixed-use development with internal multi-modal streets, sidewalks, and open spaces that would accommodate approximately 20,000 square feet of neighborhood serving retail.

The General Plan's Priority Housing Element sites, including the proposed project site, are located on major corridors to reduce traffic, environmental impacts, and preserve neighborhoods. The Priority Housing Element sites in the adopted Housing Element are intended to accommodate the Regional Housing Needs Allocation for the 2014-2022 planning period and meet the City's fair-share housing obligation of 1,064 units. According to the Housing Element, the site has a maximum density of 30 dwelling units per acre. While the General Plan's Housing Element assigned a realistic capacity estimate of 200 units to the project site, because the site is approximately 8.1 acres, up to 243 units could be built on the site. The proposed project includes 242 units which is just below the maximum potential based on the density designated for the site.

The Commercial/Residential land use designation allows primarily commercial uses and secondarily residential uses or a compatible combination of the two. An overarching goal of the regional *Plan Bay Area* is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, vehicle miles traveled (also referred to as "VMT"), and associated greenhouse gas (GHG) emissions reductions, thus minimizing air quality impacts.

The project site is zoned Planned Development with General Commercial and Residential (P(CG,RES)) on the City's Zoning Map. Per CMC Section 19.80.030(B), all planned development districts are identified on the zoning map with the letter coding "P" followed by a specific reference to the general type of use allowed in the particular planning development zoning district.[11] The general types of uses allowed on the project site are General Commercial and Residential. Accordingly, the proposed project is a permitted use on the site.

As described above and identified in the Initial Study (see Appendix A of this the Draft EIR), the proposed project would not have the potential to substantially affect housing, employment, or population

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[9] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-44.

[10] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-18.

[11] CMC, Title 19, Zoning, Chapter 19.80, Planned Development, Section 19.80.030, Establishment of Districts-Permitted and Conditional Uses.

projections within the region, which are the basis of the 2017 Clean Air Plan projections. Therefore, under CEQA Guidelines Section 15206, the proposed project is not considered a regionally significant project that would affect regional vehicle miles traveled (VMT) and warrant intergovernmental review by ABAG[12] and MTC.[13] Additionally, as described below in impact discussion AQ-2, construction and operational air quality emissions generated by the proposed project would not exceed the BAAQMD's emissions thresholds. These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants and would not contribute to any non-attainment areas in the SFBAAB. For these reasons described above, the proposed project would not conflict with or obstruct implementation of the 2017 Clean Air Plan, and impacts would be considered *less than significant*.

Significance Without Mitigation: Less than significant.

AQ-2 The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including reactive organic gases (ROG), oxides of nitrogen (NO_x), coarse inhalable particulate matter (PM_{10}), and fine inhalable particulate matter ($PM_{2.5}$). Development projects below these significant thresholds (shown above in Table 4.1-6) are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction Emissions

Construction-generated emissions are relatively short term and of temporary duration, lasting only as long as construction activities occur, but are considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction.
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.
- ROG emissions from asphalt off-gassing and architectural coatings.

The duration of construction activities for the proposed project is estimated to be approximately 16 months. The proposed project would demolish the existing shopping center and surface parking. In

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[12] Association of Bay Area Governments (ABAG), Regional Clearinghouse http://abag.ca.gov/planning/clearinghouse.html, accessed July 30, 2019.

[13] Metropolitan Transportation Commission (MTC), Air Quality Conformity, http://www.mtc.ca.gov/planning/air_quality/, accessed July 30, 2019.

addition, the proposed project would require 69,000 cubic yards of soil to be exported from the site during the grading and site preparation phases to accommodate a subterranean parking garage. Predicted average daily construction-generated emissions for the proposed project are identified in Table 4.1-7.

Fugitive Dust

Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. As shown in Table 4.1-7, the BAAQMD does not have numerical threshold for construction fugitive dust, but instead recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds (see Mitigation Measure AQ-2).

TABLE 4.1-7 AVERAGE DAILY PROJECT CONSTRUCTION EMISSIONS

	Pollutant (average pounds per day)[a, b]					
			Exhaust		Fugitive Dust	
Emissions Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOX)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2019						
Unmitigated Emissions	4	50	2	2	6	2
2020						
Unmitigated Emissions	32	28	1	1	3	1
Maximum Unmitigated	32	50	2	2	6	2
BAAQMD Significance Threshold	54	54	82	54	N/A	N/A
Exceed BAAQMD Threshold after Mitigation?	No	No	No	No	N/A	N/A

Notes:

a. Emissions were calculated using CalEEMod. Average daily emissions were calculated by dividing the annual emissions by the number of working days of construction for the year (project construction is two full years and would have approximately 250 days per year).

b. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, updated May 2017.

Source: Kimley-Horn and Associates, PlaceWorks, 2019.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. As shown in Table 4.1-7, average daily project construction emissions would not exceed BAAQMD thresholds. Implementation of Mitigation Measure AQ-2 would further minimize emissions due to the idling restrictions and maintenance requirements placed on construction equipment.

Reactive Organic Gases Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. The highest concentration of ROG emissions would be generated during the application of architectural coatings beginning in 2020. As required by law, all architectural coatings for the proposed project structures would comply with BAAQMD Regulation 8, Rule 3: Architectural Coating. Regulation 8, Rule 3 provides specifications for painting practices and regulates the ROG content of paint. As shown in Table 4.1-7, average daily project construction ROG emissions would not exceed BAAQMD thresholds.

Summary

As shown in Table 4.1-7 and described above, project construction would not exceed the BAAQMD average daily thresholds of significance. Although the BAAQMD does not have numerical thresholds for fugitive PM_{10} and $PM_{2.5}$ emissions, the proposed project would be required to comply with the BAAQMD Basic Construction Measures (see Mitigation Measure AQ-2). Furthermore, the proposed project would be subject to applicable BAAQMD Regulations, such as Regulation 8, Rule 3: Architectural Coatings and Rule 15: Emulsified and Liquid Asphalts, and Regulation 9, Rule 8: Organic Compounds to further reduce specific construction-related emissions. Table 4.1-7 identifies project emissions with the implementation of the applicable reduction measures required by BAAQMD Rules. With the implementation of Mitigation Measure AQ-2, construction impacts would be less than significant.

Impact AQ-2: Uncontrolled fugitive dust (PM_{10} and $PM_{2.5}$) could expose the areas that are downwind of construction sites to air pollution from construction activities without the implementation of BAAQMD's best management practices.

> **Mitigation Measure AQ-2: BAAQMD Basic Construction Measures.** Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are:
>
> - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
> - All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
> - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
> - All vehicle speeds on unpaved roads shall be limited to 15 mph.
> - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
> - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure

Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

Significance With Mitigation: Less than significant.

Operational Emissions

Operational emissions for residential developments are typically generated from mobile sources (burning of fossil fuels in cars); energy sources (cooling, heating, and cooking); and area sources (landscape equipment and household products). According to Table 4.1-8 shows ROG emission thresholds exceeded for area source emissions.

TABLE 4.1-8 AVERAGE DAILY PROJECT OPERATIONAL EMISSIONS UNMITIGATED

	Pollutant (average pounds per day)[a, b]					
			Exhaust		Fugitive Dust	
Emissions Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Annual Emissions (maximum tons per year)						
Area Source Emissions	2	<1	<1	<1	--	--
Energy Emissions	<1	<1	<1	<1	--	--
Mobile Emissions[1]	1	2	<1	<1	2	<1
Total Project Unmitigated Emissions	3	2	<1	<1	2	<1
BAAQMD Threshold[1]	10	10	15	10	N/A	N/A
Is Threshold Exceeded?	No	No	No	No	N/A	N/A
Average Daily Emissions (pounds)						
Area Source Emissions	13	<1	<1	<1	--	--
Energy Emissions	<1	1	<1	<1	--	--
Mobile Emissions[1]	3	12	<1	<1	9	2
Total Project Unmitigated Emissions	16	13	<1	<1	9	2
BAAQMD Threshold[2]	54	54	82	54	N/A	N/A
Is Threshold Exceeded?	No	No	No	No	N/A	N/A

Notes:
a. Mobile emissions conservatively represent emissions associated with the full project (i.e., 2,174 daily vehicle trips), and do not take credit/trip reductions for the existing uses.
b. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, 2017.
Source: Kimley-Horn and Associates, PlaceWorks. 2019.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport PM_{10} and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions were estimated using CalEEMod. Trip generation rates associated with the proposed project were based on the transportation analysis prepared by Kimley-Horn and Associates dated November 2018 (see Chapter 4.8, Transportation, and Appendix H, Transportation Assessment, of this Draft EIR). Based on the transportation analysis, the proposed project would result in an average of approximately 2,174 total daily vehicle trips (it should be noted that the air quality analysis conservatively does not take credit for existing vehicle trips generated on the project site or internal trip capture). Table 4.1-8 shows that the project emissions generated by vehicle traffic associated with the proposed project would not exceed established BAAQMD regional thresholds.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the proposed project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 4.1-8, unmitigated energy source emissions from the proposed project would not exceed BAAQMD thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$. As indicated in Table 4.1-8, operational emissions from the proposed project would not exceed BAAQMD thresholds. Therefore, the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. As a result, impacts associated with operational air quality would be *less than significant*.

Area Source Emissions

Area source emissions would be generated due to an increased demand for consumer products, architectural coating, hearths, and landscaping. As shown in Table 4.1-8, unmitigated area source emissions from the proposed project would not exceed BAAQMD thresholds. Therefore, impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

AQ-3 The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

The proposed project could expose sensitive receptors to elevated pollutant concentrations if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Toxic Air Contaminants

Construction

Construction-related activities would result in emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., demolition, clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptors to the project site are listed in Table 4.1-5 previously shown. These include the residences to the north on Mary Avenue, the senior center to the east on Mary Avenue, and De Anza College south of Stevens Creek Boulevard.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur throughout the site. Construction activities would be subject to and would comply with State regulations limiting idling to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Furthermore, even during the most intense year of construction, emissions of diesel PM would be generated from different locations on the project site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time.

Maximum (worst case) $PM_{2.5}$ exhaust construction emissions over the entire construction period were used in AERSCREEN to approximate construction DPM emissions. Risk levels were calculated according to the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document.

The results of this assessment indicate that the maximum concentration of $PM_{2.5}$ during construction would be 0.011 $\mu g/m^3$, which is below the BAAQMD significance threshold of 0.3 $\mu g/m^3$. The highest calculated carcinogenic risk from project construction is 2.23 per million based on an annual PM_{10} concentration of 0.012 $\mu g/m^3$. Non-cancer hazards for DPM would be below the BAAQMD threshold of 1.0, with a chronic hazard index computed at 0.001 and an acute hazard index of 0.01. As described above, worst-case construction risk levels based on screening-level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds. Therefore, construction risk levels would be less than significant.

Operation

The proposed project would not be considered a source of TACs that would pose a possible risk to off-site uses. The proposed project involves the future development of mixed-use project that would include commercial and residential uses. The proposed project would not include stationary sources that emit TACs and would not generate a significant amount of heavy-duty truck trips (a source of DPM). Therefore, no impacts to surrounding receptors associated with TACs would occur.

Significance Without Mitigation: Less than significant.

Carbon Monoxide Hotspots

Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours.

The SFBAAB is designated as attainment for CO. Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan (CMP) and would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. According to the transportation analysis prepared for the proposed project, the entire project would generate 108 total morning (AM) peak hour trips and 186 total evening (PM) peak hour trips. The project study intersection with the highest traffic volumes (Stevens Creek Boulevard/ Mary Avenue) would have 3,055 vehicles during the morning peak hour and 3,752 vehicles during the evening peak hour. Therefore, the proposed project would not involve intersections with more than 24,000 or 44,000 vehicles per hour. As a result, the proposed project would not generate a significant number of vehicle trips and impacts associated with CO concentrations would be less than significant.

Significance Without Mitigation: Less than significant.

4.1.4 CUMULATIVE IMPACTS

AQ-4 The proposed project, in combination with past, present, and reasonably foreseeable projects, would not cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

The impact discussion above is based on the cumulative setting because all development within the SFBAAB contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect. As discussed above, Mitigation Measure AQ-2 is required to reduce the proposed project's contribution to regional air quality impacts. Therefore, the cumulative impact would be less than significant with implementation of Mitigation Measure AQ-2, and, no further discussion of cumulative impacts is necessary.

Significance With Mitigation: Less than significant.

4.2 BIOLOGICAL RESOURCES

This chapter includes an evaluation of the potential environmental consequences on biological resources from construction and operation of the proposed project. This chapter also describes the environmental setting, including regulatory framework and existing biological resources in the vicinity of the proposed project, and identifies mitigation measures, if required, that would avoid or reduce significant impacts.

Biological resources associated with the proposed project were identified through a review of available information concerning biological resources in the central Santa Clara County area, presence of sensitive natural communities, and the distribution and habitat requirements of special-status species which have been recorded from or are suspected to occur in the project vicinity, including a record search conducted by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW) and mapping of habitat types prepared as part of the Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG)[1] habitat mapping program by the United States Department of Agriculture Forest Service (USDA).

In addition, this chapter includes information from the *Preliminary Arborist Report* (Arborist Report) that was prepared for the project applicant by HortScience, Inc. dated July 2018, which includes a tree assessment completed in May 2018. This Arborist Report was reviewed and approved by Michael Bench, Consulting Arborist for the City of Cupertino, and is included in Appendix D, Arborist Report and Tree Removal Plan, of this Draft EIR.

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 REGULATORY FRAMEWORK

This section summarizes existing federal, State, regional, and local policies and regulations that apply to biological resources.

State and Federal

State and federal agencies have a lead role in the protection of biological resources under their permit authority set forth in statues and regulations. The United States Fish and Wildlife Service (USFWS) is responsible for administering the Migratory Bird Treaty Act (MBTA) and the federal Endangered Species Act (ESA).

At the State level, the California Department of Fish and Wildlife (CDFW) is responsible for administration of the California Endangered Species Act (CESA). Sections 3500-3516, 4700, 5050, and 5515 of the California Fish and Game Code address Fully Protected species.

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[1] The CALVEG system was initiated in January 1978 by the Region 5 Ecology Group of the US Forest Service to classify California's existing vegetation communities for use in statewide resource planning. CALVEG maps use a hierarchical classification on the following categories: forest; woodland; chaparral; shrubs; and herbaceous.

Special-status species are plants and animals that are legally protected under the ESA/CESA or other laws and regulations, and also include other species considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species with legal protection under the ESA/CESA may present major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species. “Take” is a term used in the ESA to include, "harass, harm, pursue, hunt, shoot, wound, kill trap, capture, or collect, or to attempt to engage in any such conduct."[2]

The primary information source on the distribution of special-status species in California is the CNDDB inventory, which is maintained by the Natural Heritage Division of the CDFW. Occurrence data is obtained from a variety of scientific, academic, and professional organizations, private consulting firms, and knowledgeable individuals, and is entered into the inventory as expeditiously as possible. The presence of a population of species of concern in a particular region is an indication that an additional population may occur at another location within the region, if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, only that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination of the presence or absence of sensitive resources from a particular location, unless suitable habitat is determined to be absent.

In addition to species-oriented management, protecting habitat on an ecosystem-level is increasingly recognized as vital to the protection of natural diversity in the State. The CNDDB also monitors the locations of natural communities that are considered rare or threatened, known as sensitive natural communities. The CNDDB has compiled a list of sensitive natural communities that are given a high inventory priority for mapping and protection. Although these natural communities have no legal protected status under the ESA/CESA, they are provided some level of protection under the CEQA Guidelines. A project would normally be considered to have a significant effect on the environment if it would substantially affect a sensitive natural community, such as a riparian woodland, native grassland, or coastal salt marsh. Further loss of a sensitive natural community could also be interpreted as substantially diminishing habitat, depending on the relative abundance, quality and degree of past disturbance, and the anticipated impacts.

Local

Cupertino General Plan

The Cupertino General Plan (Community Vision 2015-2040) includes policies that are relevant to the protection of biological resources and applicable to the proposed project. The policies are identified in Chapter 6, Environmental Resources and Sustainability, of the General Plan and listed below in Table 4.2-1.

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[2] United Stated Fish & Wildlife Services Endangered Species Act 40 Years of Conserving Endangered Species, https://www.fws.gov/endangered/esa-library/pdf/ESA_basics.pdf.

TABLE 4.2-1 GENERAL PLAN POLICIES RELEVANT TO BIOLOGICAL RESOURCES

Policy Number	Policy
Chapter 6, Environmental Resources and Sustainability (ES)	
Policy ES-5.1	**Urban Ecosystem.** Manage the public and private development to ensure the protection and enhancement of its urban ecosystem.
Policy ES-5.2	**Development near Sensitive Areas.** Encourage the clustering of new development away from sensitive areas such as riparian corridors, wildlife habitat and corridors, public open space preserves and ridgelines. New developments in these areas must have a harmonious landscaping plan approved prior to development.
Policy ES-5.3	**Landscaping in and near Natural Vegetation.** Preserve and enhance existing natural vegetation, landscape features and open space when new development is proposed within existing natural areas. When development is proposed near natural vegetation, encourage the landscaping to be consistent with the palate of vegetation found in the natural vegetation.
Policy ES-5.6	**Recreation and Wildlife.** Provide open space linkages within and between properties for both recreational and wildlife activities, most specifically for the benefit of wildlife that is threatened, endangered or designated as species of special concern.

Source: Cupertino General Plan (Community Vision 2015-2040).

Cupertino Municipal Code

The Cupertino Municipal Code (CMC) includes various directives to minimize adverse impacts to biological resources. The provisions related to potential impacts from the proposed project are included in Title 14, Streets, Sidewalks, and Landscaping, as follows:

- **Chapter 14.12, Trees.** This chapter provides regulations for the planting, care, and maintenance of public trees. “Public trees” are park trees and street trees collectively. For continued funding for maintenance of public trees, this chapter establishes requirement for the payment of reimbursement costs to the City to plant street trees as a condition of building permit issuance.
- **Chapter 14.15, Landscape Ordinance.** This chapter implements the California Water Conservation in Landscaping Act of 2006 by establishing new water-efficient landscaping and irrigation requirements. In general, any building or landscape projects that involve more than 2,500 square feet of landscape area are required to submit a Landscape Project Submittal to the Director of Community Development for approval. Existing and established landscapes over 1 acre, including cemeteries, are required to submit water budget calculations and audits of established landscapes.
- **Chapter 14.18, Protected Trees.** This chapter contains regulations for the protection, preservation, and maintenance of trees of certain species and sizes. Removal of a protected tree requires a permit from the City. “Protected” trees include trees of a certain species and size in all zoning districts; heritage trees in all zoning districts; any tree required to be planted or retained as part of an approved development application, building permit, tree removal permit, or code enforcement action in all zoning districts; and approved privacy protection planting in R-1 zoning districts. Protected trees include trees of the following species that have a minimum single trunk diameter of 10 inches (31-inch circumference) or a minimum multi-trunk diameter of 20 inches (63-inch circumference) measured as 4.5 feet from the natural grade: native oak tree species (*Quercus spp.*), including coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), and interior live oak (*Quercus wislizeni*); California buckeye (*Aesculus californica*); big leaf maple (*Acer macrophyllum*); deodar cedar (*Cedrus deodara*); blue atlas cedar (*Cedrus*

atlantica 'Glauca'); bay laurel or California bay (*Umbellularia californica*); and western sycamore (*Platanus racemosa*).

4.2.1.2 EXISTING CONDITIONS

This section describes the existing conditions of the plant and wildlife resources in Cupertino and the project area. The following descriptions are based on available background data and review of aerial photographs of the project site and surrounding vicinity, as well as site visits by arborists from HortScience on May 9, 2018 (see Appendix D of this Draft EIR).

Biological Communities

The project site and surrounding area has been urbanized and now supports roadways, structures, other impervious surfaces, areas of turf, and ornamental landscaping. Remnant native trees are scattered throughout the urbanized area, together with non-native trees, shrubs, and groundcovers. The site includes a one-story shopping center that is currently operating. The project site is bound by roadways on all sides and property, and land beyond the roadways is developed with residential, senior services, and educational land uses. As previously described, the CALVEG habitat mapping program classifies the site as an "urban area" that tends to have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance.

The diversity of urban wildlife depends on the extent and type of landscaping and remaining open space, as well as the proximity to natural habitat. Trees and shrubs used for landscaping provide nest sites and cover for wildlife adapted to developed areas. Typical native bird species include the mourning dove, scrub jay, northern mockingbird, American robin, brown towhee, American crow, and Anna's hummingbird, among others. Introduced species include the rock dove, European starling, house finch, and house sparrow. Urban areas can also provide habitat for several species of native mammals such as the California ground squirrel and striped skunk, as well as the introduced eastern fox squirrel and eastern red fox. Introduced pest species such as the Norway rat, house mouse, and opossum are also abundant in developed areas. Numerous bat species are also known to be in the Cupertino area, most of which are relatively common and are not considered special-status species.

Special-Status Plant and Wildlife Species

Given the urbanized and built-out nature of the site and the surrounding area, a search of CNDDB records was conducted within a 1-mile radius surrounding the project site on September 18, 2019. The results of this search show no record of special-status plant or animal species on the project site. However, there are two occurrences of special-status animal species within the 1-mile buffer of the project site, to the west of the project site across SR-85. A White-tailed kite occurrence was reported approximately 0.45 miles to the southwest of the project site, and a Yuma myotis occurrence was reported approximately 0.6 miles to the west of the project site. However, no essential habitat for these special-status species is present on the site, due to its developed and urbanized nature.

Protected Nesting Birds

There is a possibility that birds could nest in trees and other landscaping on the project site. The nests of most bird species are protected under the MBTA when in active use, and there is a remote possibility that one or more raptor species protected under the MBTA and CFG Code could nest on the project site. These include both the Cooper's hawk (*Accipiter cooperi*) and white-tailed kite (*Elanus leuocurus*), which have reported CNDDB occurrences within the city boundary, together with more common raptors such as red-tailed hawk, great horned owl, and American kestrel, all of which are protected by the MBTA and CFG Code when their nests are in active use. However, no essential habitat for these or other special-status species is present on the site due to its developed condition.

Protected Bats

Numerous bat species are known to be in the Cupertino area, most of which are relatively common and are not considered special-status species. As previously stated, the CNDDB does not show any occurrences of special-status bats within the site vicinity. However, there has been one Yuma myotis bat species occurrence recorded approximately 0.65 miles west of the project site. The CNDDB also shows records within several miles of Cupertino. The records include occurrences of Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), and Yuma myotis (*Myotis yumanensis*). These three species have no legal protected status under the ESA or CESA, but the Townsend's big-eared bat is considered a Species of Special Concern by the CDFW. These species have priority rankings assigned by the Western Bat Working Group (WBWG), which range from "High" for Townsend's big-eared bat, "Medium" for hoary bat, to "Low-Medium" for Yuma myotis. Bat species found in the Cupertino vicinity may forage and occasionally roost in the site vicinity, but because the Oaks Shopping Center is occupied, no suitable habitat for maternity roosts are on the site.

Protected Trees

According to the Vegetation Map shown in the Environmental Resources and Sustainability Element of the General Plan, most of the City, including the project site, is within the urban forest.[3] The City recognizes that every tree on both public and private property is an important part of Cupertino's urban forest and contributes significant economic, environmental and aesthetic benefits of the community.[4]

The Arborist Report was prepared for the proposed project to assess the health and structural conditions of the trees on the project site, identify all "protected trees" as defined by CMC Chapter 14.18 (Protected Tree Ordinance) described in the regulatory setting above, assess the impacts of constructing the proposed project on the trees, and present guidelines for tree preservation.[5] The Arborist Report evaluated the 83 trees on the site. These trees represent the following species: Japanese maple (*Acer*

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[3] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 6, Environmental Resources and Sustainability Element, Figure ES-1.

[4] City of Cupertino, Tree Protection and Tree Removal link on the City's website. https://www.cupertino.org/our-city/departments/community-development/planning/residential-development/tree-protection-tree-removal, accessed on May 6, 2019.

[5] HortScience, Inc., July 2018, Preliminary Arborist Report: The Oaks Shopping Center, Cupertino, CA.

palmatum), Deodar cedar (*Cedrus deodara*), Nichol's gum (*Eucalyptus nicholii*), Evergreen ash (Fraxinus uhdei), Crape myrtle (*Lagerstroemia indica*), Canary Island pine (Pinus canariensis), Monterey pine (Pinus radiata), Chinese pistache (*Pistacia chinensis*), Victorian box (*Pittosporum undulatum*), Callery pear (*Pyrus calleryana*), Evergreen pear (*Pyrus kawakamii*), Coast live oak (*Quercus agrifolia*), and Holly oak (*Quercus ilex*).

The project site includes a mix of young trees planted throughout the parking lots, semi-mature trees along the perimeter, and four veteran oak trees likely preserved during the last site development. Veteran oaks may be indigenous to the site, but the remaining trees are planted exotics.

The professional arborist evaluated the health and structural condition of the 83 trees on the project site, applying a scale of 1 to 5, with 1 being the poorest condition and 5 being a good condition. These are defined as follows:

- Good Condition:
    - 5: A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
    - 4*:* Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
- Fair Condition:
    - 3*:* Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
- Poor Condition:
    - 2: Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
    - 1: Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.

A majority of the trees were in fair (approximately 40 percent) and poor (approximately 39 percent) condition, with 18 trees (approximately 21 percent) in good condition. Tree sizes range from 2 to 51 inches in diameter.

Out of the 83 trees surveyed, the Arborist Report identified 74 trees, including 14 protected trees, that would be directly impacted by development and would require removal. The professional arborist assigned a preservation suitability rating for each of the 83 trees of either "high", "moderate", or "low." Suitability for preservation considers the health, age, and structural condition of the tree, and its potential to remain an asset to the site for years to come. Preservation suitability ratings are defined as follows:

- High: Trees with good health and structural stability that have the potential for longevity at the site. The following seven trees were determined to be highly suitable for preservation: three crape myrtles, two Nichol's gum, one deodar cedar, and one coast live oak.

- **Moderate:** Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intensive management and monitoring and may have shorter life span than those in "high" category. Thirty-four (34) trees were determined to be of moderate suitability for preservation: 14 evergreen ash, 13 coast live oaks, 2 evergreen pears, 2 Chinese pistache, one Victorian box, one Japanese maple, and one Canary Island pine.
- **Low**: Trees in poor health or with significant structural defects that cannot be mitigated, and which are expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes and generally are unsuited for use areas. Forty-two (42) trees were determined to have low suitability for preservation: 22 Chinese pistache, 10 evergreen ash, four coast live oaks, two callery pears, one Monterey pine, one holly oak, one Victorian box, and one Nichol's gum.

Of the 74 trees in the proposed development areas subject to removal, 14 of the trees qualify as protected trees. Nine trees have been preliminarily identified for preservation, including one protected tree. Impacts to protected trees are discussed in Section 4.2.3, Impact Discussion, below.

4.2.2 THRESHOLDS OF SIGNIFICANCE

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process, it was determined that development of the proposed project would not result in significant environmental impacts related to the following significance standards and, therefore, are not discussed in this chapter.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community type.
- Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, their wildlife corridors, or nursery sites.
- Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan.

Based on the Initial Study and comments received during the scoping process it was determined that the proposed project could result in a potentially significant impact to biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species.
2. Conflict with any local ordinances or policies protecting biological resources.

4.2.3 IMPACT DISCUSSION

BIO-1 The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive, or special-status species.

Nesting Birds

As stated above in the existing conditions discussion, there are no known occurrences of special-status plant or animal species and no suitable habitat for such species on the project site, but there is a possibility that birds that are protected by the MBTA and CFG Code could nest in trees and other landscaping on the project site. However, no essential habitat for these or other special-status species is present on the site due to its developed condition. Mitigation Measure BIO-1 would be required for the proposed project to reduce impacts to a *less-than-significant* level.

Impact BIO-1: Tree removal and demolition activities during site clearance could destroy active nests, and/or otherwise interfere with nesting of birds protected under federal and State law.

Mitigation Measure BIO-1: Nests of raptors and other birds shall be protected when in active use, as required by the federal Migratory Bird Treaty Act and the California Fish and Game Code. The construction contractor shall indicate the following on all construction plans, if construction activities and any required tree removal occur during the breeding season (February 1 and August 31). Preconstruction surveys shall:

- Be conducted by a qualified biologist prior to tree removal or grading, demolition, or construction activities. Note that preconstruction surveys are not required for tree removal or construction, grading, or demolition activities outside the nesting period.
- Be conducted no more than 14 days prior to the start of tree removal or construction.
- Be repeated at 14-day intervals until construction has been initiated in the area after which surveys can be stopped.
- Document locations of active nests containing viable eggs or young birds.

Protective measures for active nests containing viable eggs or young birds shall be implemented under the direction of the qualified biologist until the nests no longer contain eggs or young birds. Protective measures shall include:

- Establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest location as determined by the qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance and proximity to existing development. In general, exclusion zones shall be a minimum of 300 feet for raptors and 75 feet for passerines and other birds.

- Monitoring active nests within an exclusion zone on a weekly basis throughout the nesting season to identify signs of disturbance and confirm nesting status.
- An increase in the radius of an exclusion zone by the qualified biologist if project activities are determined to be adversely affecting the nesting birds. Exclusion zones may be reduced by the qualified biologist only in consultation with California Department of Fish and Wildlife.
- The protection measures shall remain in effect until the young have left the nest and are foraging independently or the nest is no longer active.

Significance With Mitigation: Less than significant.

Bird Collision

Avian injury and mortality resulting from collisions with buildings, towers and other man-made structures is a common occurrence in city and suburban settings. Some birds are unable to detect and avoid glass and have difficulty distinguishing between actual objects and their reflected images, particularly when the glass is transparent and views through the structure are possible. Night-time lighting can interfere with movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. The frequency of bird collisions in a particular area is dependent on numerous factors, including: characteristics of building height, fenestration (the arrangement of windows and doors on the sides of a building), and exterior treatments of windows and their relationship to other buildings and vegetation in the area; local and migratory avian populations, their movement patterns, and proximity of water, food and other attractants, time of year; prevailing winds; weather conditions; and other variables.

The proposed mixed-use development would alter the physical characteristics of the site; however, this change is not expected to contribute to a substantial increase in the risk of local and migratory bird collisions. This is due to several reasons, including the fact that the surrounding area is already developed with urban structures of similar bulk and surface treatment. As discussed below, the proposed building materials would be non-reflective; and the proposed lighting would be low-level illumination with no up-lighting. In addition, the site is occupied by five existing structures, and, as under the existing conditions, most birds would likely acclimate to the presence of the new buildings once completed. Therefore, the potential risk of bird collision with the new buildings would be a less-than-significant impact.

There are design options to minimize the risk of bird collisions through the use of bird-safe design for window treatments, rooftop equipment, and night-time lighting. While any bird collisions that do occur should not have a substantial adverse effect on special-status bird species or more common bird species that may be flying through the vicinity, the applicant has committed to implementing bird-safe design measures in the new buildings, which would further address the low risk of collision. These design measures include the following:[6]

- Reduce large areas of transparent or reflective glass:

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[6] Bird safe design element examples were provided in a letter from Steven Ohlhaber at C2K Architecture to the Gian Martire at the City of Cupertino dated July 5, 2019.

  - The proposed project would be primarily solid wall buildings with punched and recessed windows to help reduce the overall visibility of windows.
  - Residential windows areas would use mullions and/or muttons to divide overall window size.
  - Balcony railings would be picket style with no reflective glass railings on the proposed project.
  - The largest areas of glass are at the retail storefront level, where fritting or appliques and louvers and opaque spandrel panels at the tops of the retail storefront windows would be used to deter birds.
  - Some of the primary retail storefront would be set back from the façade or in an arcade, reducing the view angle and visibility of these retail storefront windows to birds.
  - The buildings would incorporate overhanging roofs and projecting balconies that shield windows from overhead flying birds.

- Avoid transparent glass skyways, walkways and entryways, as well as free-standing glass walls and transparent building corners.
  - There would be no glass skyways, walkways or large commercial glass style entryways, freestanding glass walls or transparent building corners in the design.
  - The largest areas of glass would be at the retail storefront level, where fritting or appliques may be used to deter birds and louvers or opaque spandrel panels at the tops of the storefront windows.

- Avoid the funneling of open space toward a building façade.
  - The project site plan would be open with no narrow, dead-end alley ways.

- Landscaping to reduce reflections and views of foliage through glass.
  - The townhome/ rowhome design of the proposed project would use primarily opaque walls, which would reduce the amount of any vegetation reflection.
  - The lowest windows of the townhome / rowhomes would be fitted with fritting, exterior shutters or translucent film as these are primarily garage windows. This would reduce ground level vegetation reflections in these windows without diminishing the living spaces.
  - Low reflectivity glass would be implemented on the store fronts to reduce vegetation reflectivity.

- Reduced or eliminated up-lighting and spotlights on buildings.
  - No up-lighting and/or spot lighting would be planned for the buildings or landscape.
  - The proposed project would use shielded, dark sky compliant fixtures for exterior lighting.

- Turning off-non-emergency lighting at night, especially during migration.
  - At the retail areas, reduced lighting at non-operating hours would be required for the commercial uses.

The location of the project site, the building design features, and selected materials were determined to adequately address the remote potential for special-status bird species dispersing through the site vicinity to collide with the new structure and be injured or killed. These measures would serve to minimize the potential for bird strikes through the use of bird-friendly design guidelines in the treatment of windows and other aspects of the proposed mixed-use building and would ensure any potential impact would be less than significant for special-status birds and more common bird species.

Significance Without Mitigation: Less than significant.

Roosting Bats

As described in the existing conditions, the recent CNDDB records search included occurrences of Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), and Yuma myotis (*Myotis yumanensis*). These three species have no legal protected status under the federal or State Endangered Species Acts, but Townsend's big-eared bat is considered a Species of Special Concern by the CDFW. Bat species found in the Cupertino vicinity may forage and occasionally roost in the site vicinity, but suitable habitat conditions for maternity roots is absent from the site. The potential for any special-status bat species to be present on the site is considered highly remote, given the urbanization of the site vicinity and intensity of human activity, which typically discourages possible occupation by special-status bats. Accordingly, the construction and operation of the proposed project would not result in the inadvertent loss of any bats and impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

BIO-2 The proposed project would not conflict with a local ordinances or policies protecting biological resources.

As described below, the proposed project would not conflict with any relevant goals and policies in the General Plan related to protection of biological resources:

- Policy ES-5.1 encourages the management of public and private development, specifically landscaping and the built environment, to ensure the protection and enhancement of its urban ecosystem. The proposed project would include planting approximately 400 trees on-site, 87,846 square feet of landscaping, and 10,320 square feet of bioretention areas, which would enhance urban ecosystem while also providing stormwater treatment that is beneficial to the environment.
- Policy ES-5.2 encourages the clustering of new development away from sensitive areas such as riparian corridors, wildlife habitat and corridors, public open space preserves and ridgelines. The proposed project would be located in an infill, urban area, which does not contain any sensitive habitat of special concern.
- Policy ES-5.3 calls for the preservation and enhancement of existing natural vegetation, landscape features, and open space when new development is preserved in existing natural areas. As described above, the project site currently contains open space and vegetated areas, but these areas are currently landscaped and are not in their natural state. The project site is previously disturbed, is developed for private use, and is located within an urban area; therefore, it does not serve as a natural open space area. The project site would provide landscaping throughout the project site's interior and the surrounding perimeter and would comply with City's Landscape Ordinance (CMC Chapter 14.15). Proposed landscaping would be consistent with the Northern California landscape and would include native and/or adaptive, and drought resistant plant materials. The majority of plantings would be drought tolerant groundcovers and shrubs, once established, would be adapted to a dry summer and intermittent rain in the winter season.
- Policy ES-5.6 calls for open space linkages within and between properties, most specifically to benefit threatened or endangered wildlife and species of concern. As described under impact discussion BIO-

> 1, the project site is not recorded as containing any special-status wildlife species. In addition, the project site is currently developed and located in an urban area. The proposed project would also include approximately 400 new trees that would support the ongoing movement of migratory birds as under current conditions. Therefore, redevelopment of the project site is would not disrupt any important wildlife linkages.

CMC Chapter 14.18, Protected Trees Ordinance, provides regulations for the protection, preservation, and maintenance of trees of certain species and sizes. As previously described under the existing conditions section, the Arborist Report prepared for the proposed project identified 14 trees that are proposed for removal that qualify as *Specimen* trees pursuant to the Protected Trees Ordinance. Specimen trees that would be removed as part of the proposed project including their species, size, condition and preservation suitability rating are listed in Table 4.2-2.

TABLE 4.2-2 PROTECTED TREES TO BE REMOVED BY THE PROPOSED PROJECT

Arborist Report Tree No.	Species	Trunk Diameter (inches)	Condition Poor/Fair/Good[a]	Suitability for Preservation (Low/Moderate/High)[b]
1	Coast live oak	39	4	Moderate
2	Coast live oak	16	4	Moderate
3	Coast live oak	21	3	Moderate
4	Coast live oak	51	4	Moderate
5	Coast live oak	11	4	Moderate
6	Coast live oak	34	4	Moderate
7	Coast live oak	15	3	Moderate
8	Coast live oak	22	2	Moderate
16	Coast live oak	23	4	Moderate
17	Coast live oak	13	3	Low
18	Coast live oak	49	4	Low
19	Coast live oak	29	4	Low
22	Coast live oak	11, 10, 10	4	Moderate
30	Coast live oak	28, 21	4	Moderate

Notes:

a. Tree Condition Ratings:

Good Condition:

5: A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species;

4*:* Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.

Fair Condition:

3: Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.

Poor Condition:

2: Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated;

1: Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.

b. Tree Preservation Rating:

High Suitability: Trees with good health and structural stability that have the potential for longevity at the site;

TABLE 4.2-2 PROTECTED TREES TO BE REMOVED BY THE PROPOSED PROJECT

Arborist Report Tree No.	Species	Trunk Diameter (inches)	Condition Poor/Fair/Good[a]	Suitability for Preservation (Low/Moderate/High)[b]

Moderate Suitability: Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category;
Low Suitability: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Source: HortScience, 2018, *Preliminary Arborist Report*, *The Oaks Shopping Center Cupertino,* CA, Tree Assessment table.

Removal of a protected tree is permitted by the City, with approval of a tree removal permit. In some circumstances, the City requires tree management plans and tree replacement. The removal of trees protected under the City's Protected Trees Ordinance is considered a *significant* impact.

Impact BIO-2: Proposed development would result in removal of trees protected under City ordinance.

Mitigation Measure BIO-2: The proposed project shall comply with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18). A tree removal permit shall be obtained for the removal of any "protected tree," and replacement plantings shall be provided as approved by the City. If permitted, an appropriate in-lieu tree replacement fee may be paid to the City of Cupertino's Tree Fund as compensation for "protected trees" removed by the proposed project, where sufficient land area is not available on-site for adequate replacement and when approved by the City.

In addition, a Tree Protection and Replacement Program (Program) shall be developed by a Certified Arborist prior to project approval and implemented during project construction to provide for adequate protection and replacement of "protected trees," as defined by the City's Municipal Code. The Program shall include the following provisions:

- Adequate measures shall be defined to protect all trees to be preserved. These measures should include the establishment of a tree protection zone (TPZ) around each tree to be preserved, in which no disturbance is permitted. For design purposes, the TPZ shall be located at the dripline of the tree or 10 feet, whichever is greater. If necessary, the TPZ for construction-tolerant species (i.e., coast live oaks) may be reduced to 7 feet.
- Temporary construction fencing shall be installed at the perimeter of TPZs prior to demolition, grubbing, or grading. Fences shall be 6-foot chain link or equivalent, as approved by the City of Cupertino. Fences shall remain until all construction is completed. Fences shall not be relocated or removed without permission from the consulting arborist.
- No grading, excavation, or storage of materials shall be permitted within TPZs. Construction trailers, traffic, and storage areas shall remain outside fenced areas at all times. No excess soil, chemicals, debris, equipment, or other materials shall be dumped or stored within he TPZ.
- Underground services including utilities, sub-drains, water or sewer shall be routed around the TPZ. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury. Irrigation systems must be designed so that no trenching will occur within the TPZ.

- Construction activities associated with structures and underground features to be removed within the TPZ shall use the smallest equipment and operate from outside the TPZ. The consulting arborist shall be on-site during all operations within the TPZ to monitor demolition activity.
- All grading, improvement plans, and construction plans shall clearly indicate trees proposed to be removed, altered, or otherwise affected by development construction. The tree information on grading and development plans should indicate the number, size, species, assigned tree number, and location of the dripline of all trees that are to be retained/preserved. All plans shall also include tree preservation guidelines prepared by the consulting arborist.
- The demolition contractor shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection. Prior to beginning work, the contractor(s) working in the vicinity of trees to be preserved shall be required to meet with the consulting arborist at the site to review all work procedures, access routes, storage areas, and tree protection measures.
- All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved. Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the consulting arborist. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
- Any plan changes affecting trees shall be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans.
- Trees to be preserved may require pruning to provide construction clearance. All pruning shall be completed by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the 2002 Best Management Practices for Pruning published by the International Society of Arboriculture, and adhere to the most recent editions of the American National Standard for Tree Care Operations (Section Z133.1) and Pruning (Section A300).
- Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the consulting arborist.
- Any demolition or excavation, such as grading, pad preparation, excavation, and trenching, within the dripline or other work that is expected to encounter tree roots should be approved and monitored by the consulting arborist. Any root pruning required for construction purposes shall receive prior approval of, and by supervised by, the consulting arborist. Roots shall be cut by manually digging a trench and cutting exposed roots with a sharp saw.
- Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Tree stumps shall be ground 12 inches below ground surface.
- All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Game Code Sections 3503 through 3513 to not disturb nesting birds. To the extent feasible, tree

pruning, and removal shall be scheduled outside of the breeding season. Breeding bird surveys shall be conducted prior to tree work. Qualified biologists shall be involved in establishing work buffers for active nests. (see Mitigation Measure BIO-1)

- The vertical and horizontal locations of all the trees identified for preservation shall be established and plotted on all plans. These plans shall be forwards to the consulting arborist for review and comment.
- Foundations, footings, and pavements on expansive soils near trees shall be designed to withstand differential displacement to protect the soil surrounding the tree roots.
- Any liming within 50 feet of any tree shall be prohibited, as lime is toxic to tree roots. Any herbicides placed under paving materials shall be safe for use under trees and labeled for that use.
- Brush from pruning and trees removal operations shall be chipped and spread beneath the trees within the TPZ. Mulch shall be between 2 inches and 4 inches in depth and kept at a minimum of 3 feet from the base of the trees.
- All recommendations for tree preservation made by the applicant’s consulting arborist shall be followed.

Significance With Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACTS

BIO-3 **The proposed project in combination with past, present, and reasonably foreseeable projects, would/would not result in significant cumulative impacts with respect to biological resources.**

The geographic scope of the cumulative analysis for biological resources considers the surrounding incorporated and unincorporated lands, and the region. The potential impacts of proposed development on biological resources tend to be site-specific, and the overall cumulative effect would be dependent on the degree to which significant vegetation and wildlife resources are protected on a particular site. At the same time, cumulative development can contribute incrementally to regionwide impacts, such as reductions in the amount of existing wildlife habitat, particularly for birds and larger mammals. As discussed in Chapter 4, Environmental Evaluation, the cumulative development projects within the city are located in urbanized areas of the city and contain limited biological resource value. Redevelopment and infill projects, including those in built-out urban areas, would remove vegetation that could be used for nesting by birds protected under various laws and would remove buildings and trees that could be used for roosting by sensitive bat species. However, these development projects would be required to comply with the federal Migratory Bird Treaty Act and the CFG Code, which require pre-construction surveys and protective measures for active nests. Furthermore, cumulative projects would be required to obtain a tree removal permit and adhere to the tree removal requirements for protected trees under CMC Chapter 14.18, Protected Trees.

As described above, the CNDDB has no record of special-status plant or animal species on the project site or urbanized areas surrounding the project site. The project site is previously disturbed, is developed for private use, and is located within an urban area; therefore, it does not serve as a wildlife corridor. Potential impacts to nesting birds and the removal of protected trees would be mitigated to less-than-significant levels through the implementation of Mitigation Measure BIO-1 and BIO-2, respectively. Given the relatively low natural resource quality of the project site and the project's mitigation of on-site impacts to less-than-significant levels, the proposed project would result in a *less-than-significant* cumulative impact on biological resources.

Significance With Mitigation: Less than significant.

4.3 CULTURAL AND TRIBAL CULTURAL RESOURCES

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) it was determined that construction and operation of the proposed project would not result in significant environmental impacts related to historical resources defined in CEQA Guidelines Section 15064.5 with respect to historic buildings. Therefore, this chapter includes an evaluation of the potential environmental consequences to archeological resources defined in CEQA Guidelines Section 15064.5 and Tribal Cultural Resources (TCR) as defined under Assembly Bill 52 (AB 52). This chapter also describes the environmental setting, including regulatory framework and existing cultural resources on the project site, and identifies mitigation measures, if required, that would avoid or reduce significant impacts.

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

This section summarizes the existing State regulations that apply to cultural resources. There are no federal, regional, or local policies or regulations regarding this subject.

California Environmental Quality Act

Public Resources Code Section 21083.2 provides for protection of unique archaeological resources. Preservation of unique archaeological sites is the preferred treatment (21083.2[b]); however, if sites are not be preserved in place, mitigation measures shall be required as provided in 21083.2(c).

Public Resources Code Section 21084.1 addresses the issue of historical resources, which includes prehistoric Native American resources, historical-era archaeological deposits, buildings, structures, objects, and districts. Historical resources are defined as resources that are listed in or determined to be eligible for listing in the California Register of Historical Resources. It also includes resources included in a local register of historical resources or otherwise determined to be historically significant under Public Resources Code Section 5024.1.

CEQA Guidelines Section 15064.5 states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The CEQA Guidelines define four ways that a property can qualify as a historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.
- The lead agency determines that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

Public Resources Code Section 21083.2 and CEQA Guidelines Sections 15064.5(c), 15064(f), and 15126.4(b) specify lead agency responsibilities to determine whether a project may have a significant effect on unique archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The Public Resources Code also details required mitigation if unique archaeological resources are not preserved in place.

CEQA Guidelines Section 15064.5(d) and (e) specify procedures to be used in the event of a discovery of Native American human remains on non-federal land. Section 15064.5(d) addresses procedures when an initial study identifies the existence or probable likelihood of Native American human remains within a project area. Section 15064.5(e) provides guidance for accidental discovery of any human remains after a project is already under way. These provisions protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the Most Likely Descendant (MLD) and mediate any disputes regarding disposition of such remains.

Health and Safety Code Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disinterment of remains known to be human, without authority of law, is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC.

Assembly Bill 52

Assembly Bill 52 (AB 52), which took effect on July 1, 2015, amends CEQA and adds standards of significance that relate to Native American consultation and the protection of TCR under CEQA.

Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2015. As of July 1, 2016, the Governor's Office of Planning and Research (OPR) developed guidelines and the Native American Heritage Commission (NAHC) informed tribes which agencies are in their traditional area. In response to these guidelines, a discussion of impacts to TCRs has been added to Section 4.3.2, Thresholds of Significance, further in this chapter. A TCR is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included a local register of historical resources, or if the City, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR.

AB 52 requires the CEQA lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the Tribe requests in writing to be informed by the lead agency through formal notification of the proposed projects in the area. The consultation is required before the determination of whether a negative declaration, mitigated negative declaration, or EIR is required. In addition, AB 52 includes time limits for certain responses regarding consultation. CEQA Section 21084.3 has been added, which states that "public agencies shall, when feasible, avoid damaging effects to any tribal cultural resources." Information shared by tribes as a result of AB 52 consultation shall be documented in a confidential file, as necessary, and made part of a lead agencies administrative record.[1]

Public Resources Code Section 5097

Public Resources Code Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. The disposition of Native American burials falls within the jurisdiction of the NAHC, which prohibits willfully damaging any historical or archaeological site or feature on public lands.

4.3.1.2 EXISTING CONDITIONS

This section provides an overview of the history of Cupertino and archeological and historically significant resources that may be affected by the proposed project.

Methods

The cultural resources analysis conducted by Tom Origer & Associates on July 24, 2013 for the General Plan Update EIR consists of archival research at the Northwest Information Center at Sonoma State University, examination of the library and files, field inspection, and contact with the Native American community.[2]

Records searches were conducted to identify cultural resources within the city. Records searches were conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University, Rohnert Park; and the California NAHC, Sacramento. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resources records and reports for Santa Clara County. The NAHC maintains the Sacred Lands File, which includes the locations of sites with cultural significance to Native American groups.

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[1] California Public Resources Code, Section 21074.

[2] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015). See Chapter 4.4, Cultural Resources.

As part of the records search, the following State and local inventories were reviewed for cultural resources:

- California Inventory of Historic Resources;
- California Historical Landmarks;
- California Points of Historical Interest;
- Directory of Properties in the Historic Property Data File. The directory includes the listings of the National Register of Historic Places, National Historic Landmarks, the California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest; and
- Cupertino General Plan.

Publications, maps, historical aerial photographs, including an examination of the library and project files at Tom Origer & Associates, and internet sites were reviewed for archaeological, ethnographic, and historical information about the proposed project site and its vicinity. The purpose of this review was to identify known cultural resources within the city and its surroundings.

Historical Overview

This section describes the prehistory, ethnography, and history of Cupertino as determined by the records searches and literature described above.

Prehistory and Ethnography

Archaeological evidence indicates that human occupation of California began at least 12,000 years ago. Early occupants appear to have had an economy based largely on hunting, with limited exchange, and social structures based on extended family units. Later, milling technology and an inferred acorn economy were introduced. This diversification of economy appears coeval with the development of sedentism,[3] population growth, and expansion. Sociopolitical complexity and status distinctions based on wealth are also observable in the archaeological record, as evidenced by an increased range and distribution of trade goods (e.g., shell beads, obsidian tool stone), which are possible indicators of both status and increasingly complex exchange systems.

At the time of European settlement, the Cupertino area was situated within the area controlled by the Tamyen linguistic group of the Ohlone/Costanoan, near the linguistic boundary with the Ramaytush group. The Ohlone/Costanoan hunter-gatherers lived in rich environments that allowed for dense populations with complex social structures.[4] They settled in large, permanent villages about which were distributed seasonal camps and task-specific sites. Primary village sites were occupied throughout the year and other sites were visited in order to procure particular resources that were especially abundant or available only during certain seasons. Sites often were situated near fresh water sources and in ecotones where plant life and animal life were diverse and abundant.

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[3] Sedentism means the transition from a nomadic lifestyle to a society which remains in one place.

[4] Barrett, S, 1908, The Ethno-Geography of the Pomo and Neighboring Indians. University of California Publications in American Archaeology and Ethnology Vol. 6, No. 1. University of California Press, Berkeley.

Kroeber, A, 1925, Handbook of the Indians of California. Bureau of American Ethnology, Bulletin 78, Smithsonian Institution, Washington, D.C.

General History

Colonel Juan Bautista de Anza's party passed through the arroyo of San Joseph de Cupertino during exploration in March of 1776. One year later, the first Christian baptisms began in the Santa Clara Valley. Despite rampant disease and humiliation, recruitment escalated at the missions of the San Francisco Bay area. By the end of 1795, all of the Tamyen/Tamien villages had been abandoned and their former inhabitants baptized.

During the 19th century, the area was planted with vineyards and orchards by early European settlers and flourished well enough to draw more settlers to the area. Due to French and European vineyards failing in the late 1870s by *phylloxera*, California vineyards and wines did well, leading small communities to have wide-scale development and expansion. By the 1890s, *phylloxera* had spread from Europe, and the community shifted toward more fruit production.

Before the community at the crossroads of Stevens Creek Road and Saratoga-Sunnyvale Road (De Anza Boulevard) changed their name to Cupertino in 1904, it was known simply as West Side. 'Cupertino' was taken from John T. Doyle's naming his winery Cupertino after the name given to the nearby creek by Petrus Font during De Anza's 1776 expedition.

By the 1920s, Cupertino had a population of about 500, and development of the area centered around the agricultural economy, with a focus on wineries, canneries, and fruit drying and packing facilities. The Permanente Corporation was formed in 1939 to provide cement for the construction of Shasta Dam, with a huge plant and quarry just west of Cupertino. During the war, the plant also made record shipments of cement to the Pacific theatres. As the gateway to the Pacific theatre, the San Francisco Bay area experienced a post-war population boom, which in turn created a need for urban planning. In 1955, Cupertino was incorporated as Santa Clara County's 13th city in part to combat the annexation encroachment by the surrounding cities of Santa Clara, San José, Sunnyvale, and Los Altos.

In the 1960s, Cupertino transitioned from farming to industry and commercial expansion. This transition was done in anticipation, rather than as a reaction. One early successful example of this is the coalition of families that created Vallco park, which currently includes the Vallco Fashion Park.

Today, Cupertino is part of Silicon Valley, a world-renowned high-technology center and is home to many companies at the forefront of innovation.

Project Site Conditions

As stated above, no known cultural resources (i.e., archeological or historical architectural resources) are located on the site. However, development at the project site was completed between 1973 and 1976,[5] which is within the 45-year age limit established by the State Office of Historic Preservation (OHP) for buildings that may be of historical value.[6] The existing buildings are not associated with significant cultural

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[5] EBI Consulting, March 4, 2007, Phase I Environmental Site Characterization, The Oaks Shopping Center.

[6] Public Resources Code Section 5024.1

events or persons in California's past, and do not have any distinctive historical characteristics, and therefore do not have any qualifying historical value.

Known cultural resources within 1 mile of the project site are the Le Petit Trianon at 21250 Stevens Creek Boulevard, the Gazebo Trim at Memorial Park, Memorial Park, Community Center, Sports Complex, and Engles Grocery "Paul and Eddie's" at 21619 Stevens Creek Boulevard.

Tribal Cultural Resources

The City of Cupertino has not received a request from any Tribes in the geographic area with which it is traditionally and culturally affiliated to be notified about projects in the city nor has the City received any requests for consultation pursuant to CEQA Section 21080.3.1.

4.3.2 THRESHOLDS OF SIGNIFICANCE

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process, it was determined that development of the proposed project would not result in significant environmental impacts related to the following significance standard and, therefore, is not discussed in this chapter.

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Based on the Initial Study and comments received during the scoping process it was determined that the proposed project could result in a potentially significant cultural and tribal cultural resource impact if it would:

1. Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5.
2. Disturb any human remains, including those interred outside of formal cemeteries.
3. Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.

4.3.3 IMPACT DISCUSSION

CULT-1 **The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5.**

Historical and pre-contact archaeological deposits that meet the definition of historical resource under CEQA section 21084.1 or CEQA Guidelines section 15064.5 could be present at the project site and could be damaged or destroyed by ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with development allowed under the proposed project. Should this occur, the ability of the deposits to convey their significance, either as containing information about prehistory or history, or as possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

A cultural resources study was prepared for the General Plan EIR.[7] The cultural resources study did not identify any known archeological deposits on the project site. The environmental setting of the project location and the surrounding area have not changed since the preparation of the General Plan EIR. Nonetheless, as discussed in the General Plan EIR, while the site is already a developed site, it could still contain subsurface archeological deposits, including unrecorded Native American prehistoric archeological materials. Therefore, any project-related ground-disturbing activities have the potential to affect subsurface prehistoric archaeological resources that may be present, and impacts could be *potentially significant*.

Impact CULT-1: Construction of the proposed project would have the potential to cause a significant impact to an unknown archaeological resource pursuant to CEQA Guidelines Section 15064.5.

Mitigation Measure CULT-1: If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing (including grading, demolition and/or construction) activities:

- All work within 50 feet of the resources shall be halted, the City shall be notified, and a qualified archaeologist shall be consulted. The contractor shall cooperate in the recovery of the materials. Work may proceed on other parts of the project site while mitigation for tribal cultural resources, historical resources or unique archaeological resources is being carried out.
- The qualified archaeologist shall prepare a report for the evaluation of the resource to the California Register of Historical Places and the City Building Department. The report shall also include appropriate recommendations regarding the significance of the find and appropriate mitigations as follows:
  - If the resource is a non-tribal resource, the archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5.

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[7] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

  - If the resource is a tribal resource – whether historic or prehistoric – the consulting archaeologist shall consult with the appropriate tribe(s) to evaluate the significance of the resource and to recommend appropriate and feasible avoidance, testing, preservation or mitigation measures, in light of factors such as the significance of the find, proposed project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) may be implemented.
- All significant non-tribal cultural materials recovered shall be, as necessary, and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

Significance With Mitigation: Less than significant.

CULT-2 The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.

There are no known human remains on the project site; however, the potential to unearth unknown remains during ground disturbing activities associated with the construction of the proposed project could occur. Descendant communities may ascribe religious or cultural significance to such remains and may view their disturbance as an unmitigable impact. Any human remains encountered during ground-disturbing activities associated with the proposed project would be subject to federal, State, and local regulations to ensure no adverse impacts to human remains would occur in the unlikely event human remains are found.

Health and Safety Code Section 7050.5 and the CEQA Guidelines Section 15064.5(e) contain the mandated procedures of conduct following the discovery of human remains. According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The Santa Clara County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours, who would, in turn, notify the person the Native American Heritage Commission identifies as the Most Likely Descendant of any human remains. Further actions shall be determined, in part, by the desires of the Most Likely Descendant. The Most Likely Descendant has 48 hours to make recommendations or preferences regarding the disposition of the remains following allowed access to the project site. If the Most Likely Descendant does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the Most Likely Descendant's recommendations, the owner or the descendent may request mediation by the Native American Heritage Commission.

Therefore, with the mandatory regulatory procedures described above, potential impacts related to the potential discovery or disturbance of any human remains accidently unearthed during construction activities associated with the proposed project would be *less than significant*.

Significance Without Mitigation: Less than significant.

CULT-3	**The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: 1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.**

As discussed under Impacts CULT-1 and CULT-2, no known archeological resources, ethnographic sites, or Native American remains are located on the project site or the location of the off-site construction employee parking and equipment staging area. However, as discussed under Impact CULT-1, the project site could contain undiscovered subsurface archaeological deposits, including unrecorded Native American prehistoric archaeological materials. In addition, as discussed under impact discussion CULT-2, ground-disturbing activities associated with the proposed project have the potential to unearth unknown human remains. Therefore, although no known tribal cultural resources have been identified on the project site, the proposed project has the potential to disturb subsurface deposits possessing traditional or cultural significance to Native American or other descendant communities. This is considered a *potentially significant* impact.

Impact CULT-3: Construction of the proposed project would have the potential to cause a significant impact to an unknown tribal cultural resource as defined in Public Resources Code 21074.

Mitigation Measure CULT-3: Implement Mitigation Measure CULT-1.

Significance With Mitigation: Less than significant.

4.3.4 CUMULATIVE IMPACTS

CULT-4 **The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in cumulative impacts with respect to cultural resources.**

Development of the proposed project, in conjunction with buildout of the city and the region, has the potential to adversely affect archeological resources, human remains, and tribal cultural resources through their destruction or disturbance during ground-disturbing activities. Impacts to cultural resources tend to be site specific and are assessed on a site-by-site basis. The significance of the impacts would depend largely on what, if any, cultural resources occur on or near the sites of related projects that are developed in the cumulative setting. Similar to the proposed project, such determinations would be made on a case-by-case basis and, if necessary, the applicants of the related projects would be required to comply with applicable federal, State, and local regulations and implement appropriate mitigation measures. Development of the proposed project would comply with federal and State laws protecting cultural resources. Implementation of Mitigation Measures CULT-1 and CULT-3 identified above would ensure that archaeological resources, if discovered on the project site, are protected and that discovered human remains, and tribal cultural resources are handled appropriately. Thus, given that the proposed project’s cultural resources impacts are less-than-significant with mitigation, the proposed project’s impacts to cultural resources would not be cumulatively considerable. Therefore, cumulative impacts to cultural resources would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.4 GEOLOGY AND SOILS

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) it was determined that construction and operation of the proposed project would not result in significant environmental impacts related to fault ruptures, liquefaction, lateral spreading, soil erosion, soil expansion, or soil instability. Therefore, this chapter includes an evaluation of the potential environmental consequences associated with paleontological resources. This chapter also describes the environmental setting, including regulatory framework and existing paleontological resources on the project site, and identifies mitigation measures that would avoid or reduce significant impacts.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

This section summarizes the existing State regulations that apply to paleontological resources. There are no federal, regional, or local policies or regulations regarding this subject.

California Environmental Quality Act

Paleontological resources are afforded protection under CEQA. The Society of Vertebrate Paleontology has set significance criteria for paleontological resources.[1] Most practicing professional vertebrate paleontologists adhere closely to the Society of Vertebrate Paleontology's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most State regulatory agencies with paleontological laws, ordinances, regulations, and standards accept and use the professional standards set forth by the Society of Vertebrate Paleontology.

Public Resources Code Section 5097

Public Resources Code (PRC) Section 5097.5 prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

Penal Code Section 622.5

The California Penal Code Section 622.5 establishes the penalties for damage or removal of paleontological resources.

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[1] Society of Vertebrate Paleontology, 2010, Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology. Impact Mitigation Guidelines Revision Committee.

4.4.1.2 ENVIRONMENTAL SETTING

Geological Setting

As described in the Initial Study prepared for the proposed project and included in Appendix A of this Draft EIR, a Preliminary Geotechnical Investigation dated January 1, 2014 was prepared for the proposed project by Langan Treadwell Rollo.[2] The following describes the existing conditions on the project site with respect to geology and soil.

- **Geology.** The City of Cupertino lies in the west-central part of the Santa Clara Valley, a broad, mostly flat alluvial plain that extends southward from San Francisco Bay. These alluvial fan deposits are typically coarse grained with large amounts of gravel deposits. The surficial geology is described as young, unconsolidated Quaternary alluvium. The site is generally flat with elevation ranging from 290 to 300 feet above mean sea level.
- **Soils.** This analysis uses web-accessible soil mapping data compiled by the United States Department of Agriculture's Soil Conservation Survey and the California Soil Resource Laboratory hosted by University of California at Davis to identify the major soil types on the project site. The predominant soil types for the project site are soils of the Urban Land-Flaskan and Urban Land-Botella complexes generally formed on slopes of 0 to 2 percent. In almost all instances, these soils are reportedly deep and well drained, and are typified by low runoff. Additionally, surface material encountered in the borings conducted as part of the Preliminary Geotechnical Investigation consists of 3.5 to 6 inches of asphalt concrete (AC) and aggregate base (AB). Beneath the pavement section, the upper 2.5 to 6.5 feet consists of very dense sand with clay and gravel and hard sandy clay with varying amounts of gravel. Below these depths are medium dense to very dense sand and gravel layers with varying amounts of silt and clay interbedded with 3.5 to 7 feet thick layers of very stiff to hard sandy clay, sandy clay with gravel, and clay with gravel to the maximum explored depth of 46.5 feet.

Unique geologic features are those that are unique to the field of geology. Each rock unit tells a story of the natural processes operating at the time it was formed. The rocks and geologic formations exposed at the earth's surface or revealed by drilling and excavation are our only record of that geologic history. What makes a geologic unit or feature unique can vary considerably. For example, a geologic feature may be considered unique if it is the best example of its kind and has distinctive characteristics of a geologic principle that is exclusive locally or regionally, is a key piece of geologic information important to geologic history, contains a mineral that is not known to occur elsewhere in the County, or is used as a teaching tool.

Unique geological features are not common in Cupertino. The geologic processes are generally the same as those in other parts of the state, country, and even the world. The geology and soils on the project site are common throughout the city and region and are not considered to be unique.

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[2] Langan Treadwell Rollo, 2014, Preliminary Geotechnical Investigation, The Oaks 21255 Stevens Creek Boulevard Cupertino, California, January 1, 2014.

Paleontological Setting

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), microscopic plants and animals (microfossils), and trace fossils (footprints, burrows, etc.). Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the surface of the earth. Despite the abundance of these rocks, and the vast numbers of organisms that have lived through time, preservation of plant or animal remains as fossils is a rare occurrence. In many cases, fossils of animals and plants occur only in limited areas and in small numbers relative to the distribution of the living organisms they represent. The Society of Vertebrate Paleontology defines a significant fossil resource as, "identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)."[3]

A review of the University of California's Museum of Paleontology's fossil locality database was conducted for the City of Cupertino during the General Plan update process for the current Community Vision 2015-2040.[4] No paleontological resources have been identified on the project site; however, the presence of Pleistocene deposits that are known to contain fossils indicates that overall the city could contain paleontological resources.

4.4.2 THRESHOLDS OF SIGNIFICANCE

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received, it was determined that development of the proposed project would not result in significant environmental impacts related to the following significance standards and therefore, are not discussed in this chapter.

- Directly or indirectly cause potential substantial adverse effects including the risk of loss, injury or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.
  - Strong seismic ground shaking.
  - Seismic-related ground failure, including liquefaction.
  - Landslides, mudslides or other similar hazards.
- Result in substantial soil erosion or the loss of topsoil.

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[3] Society of Vertebrate Paleontology, 2010*, Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources,* page 11. Society of Vertebrate Paleontology. Impact Mitigation Guidelines Revision Committee.

[4] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Based on the Initial Study it was determined that the proposed project could result in a potentially significant impact related to geology and soils if it would:

1. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.4.3 IMPACT DISCUSSION

GEO-1 The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As discussed above in existing conditions, the geology and soils on the project site are common throughout the city and region and are not considered to be unique. While no paleontological resources have been identified within the project location, because the proposed project requires substantial excavation that could reach significant depths below the ground surface where no such excavation has previously occurred, there could be fossils of potential scientific significance that have not been recorded. Such ground-disturbing construction associated with development of the proposed project, specifically the excavation of the subterranean parking facilities, could cause damage to, or destruction of, unique paleontological resources. This is considered a *potentially significant* impact.

Impact GEO-1: Construction of the proposed project would have the potential to directly or indirectly affect an unknown unique paleontological resource.

> **Mitigation Measure GEO-1:** The construction contractor shall incorporate the following in all grading, demolition, and construction plans:
>
> - In the event that fossils or fossil-bearing deposits are discovered during grading, demolition, or building, excavations within 50 feet of the find shall be temporarily halted or diverted.
> - The contractor shall notify the City of Cupertino Building Department and a City-approved qualified paleontologist to examine the discovery.
> - The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5.
> - The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find.

- If the project applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project based on the qualities that make the resource important. The excavation plan shall be submitted to the City for review and approval prior to implementation.

Significance With Mitigation: Less than significant.

4.4.4 CUMULATIVE IMPACTS

GEO-2	**The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.**

Development under the proposed project, in conjunction with buildout of the city and the region, has the potential to adversely affect unique paleontological resources through their destruction or disturbance during ground-disturbing activities. Impacts to paleontological resources tend to be site specific and are assessed on a site-by-site basis. The significance of the impacts would depend largely on what, if any, paleontological resources occur on or near the sites of the related projects that are developed in the cumulative setting. Similar to the proposed project, such determinations would be made on a case-by-case basis and, if necessary, the applicants of the related projects would be required to comply with applicable federal, State, and local regulations and implement appropriate mitigation measures. Development of the proposed project would comply with federal and State laws protecting paleontological resources. Implementation of Mitigation Measures GEO-1 identified above would ensure that paleontological resources, if discovered on the project site, are protected. Thus, given that the proposed project's paleontological resources impacts are less than significant with mitigation, the proposed project's impacts to geology and soils would not be cumulatively considerable. Therefore, cumulative impacts to geology and soils would be *less than significant*.

Significance With Mitigation: Less than significant.

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4.5 GREENHOUSE GAS EMISSIONS

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) it was determined that construction and operation of the proposed project could potentially generate greenhouse gas (GHG) emissions that may have a significant effect on the environment and conflict with an applicable GHG plan. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, would not generate enough GHG emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. Therefore, the GHG chapter measures the proposed project's contribution to this cumulative impact.

The analysis in this chapter is based in part on the *Greenhouse Gas Emissions Assessment for the proposed Westport Project, in the City of Cupertino, California*, prepared by Kimley-Horn and Associates, and peer reviewed by PlaceWorks, in July 2019. A complete copy of this GHG study is included in Appendix E, Greenhouse Gas Emissions Assessment, of this Draft EIR. A third-party peer review of this report was completed by PlaceWorks.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming.

Table 4.5-1 describes the primary GHGs attributed to global climate change, including their physical properties.

TABLE 4.5-1 DESCRIPTION OF GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is

TABLE 4.5-1 DESCRIPTION OF GREENHOUSE GASES

Greenhouse Gas	Description
	approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from Unites States Environmental Protection Agency (USEPA), *Overview of Greenhouse Gases*, April 11, 2018. (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); USEPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; IPCC *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; USEPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

4.5.1.2 REGULATORY FRAMEWORK

This section summarizes key federal, State and local regulations and programs related to GHG emissions resulting from the proposed project.

Federal

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007, among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

United States Environmental Protection Agency Endangerment Finding

The United States Environmental Protection Agency (USEPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The U.S. Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the U.S. Supreme Court's ruling, the USEPA finalized an endangerment finding in December 2009. Based on scientific evidence, the USEPA found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the U.S. Supreme Court's interpretation of the Clean Air Act and the USEPA's assessment of the scientific evidence that form the basis for the USEPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the USEPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010 the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 to 2016. In 2010, an Executive Memorandum directed the Department of Transportation, Department of Energy, USEPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 to 2025 light-duty vehicles. The proposed standards projected to achieve

163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency.

The final rule was adopted in 2012 for model years 2017 to 2021, and NHTSA intends to set standards for model years 2022 to 2025 in a future rulemaking. On January 12, 2017, the USEPA finalized its decision to maintain the current GHG emissions standards for model years 2022 to 2025 cars and light trucks. It should be noted that the USEPA is currently proposing to freeze the vehicle fuel efficiency standards at their planned 2020 level (37 miles per gallon), canceling any future strengthening (currently 54.5 miles per gallon by 2026). In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 to 2018.

The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

State

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California’s contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of carbon dioxide equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. The transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The Legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the U.S. Some legislation, such as the landmark Assembly Bill 32 (AB 32) California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. The following describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual").[1] The Scoping Plan evaluates opportunities for sector-specific reductions; integrates early actions by CARB and the State Climate Action Team and additional GHG reduction measures by both entities; identifies additional measures to be pursued as regulations; and outlines the adopted role of a cap-and-trade program.[2] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions limit)

Signed into law in September 2016, Senate Bill 32 (SB 32) codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). This bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030 and adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

2017 Scoping Plan Update

On December 14, 2017 CARB adopted a second update to the Scoping Plan. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping Plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and, support the Clean Power Plan and other federal actions.

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[1] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

2 The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

Senate Bill 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

Assembly Bill 1493 (Pavley Regulations and Fuel Efficiency Standards)

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the USEPA's denial of an implementation waiver. The USEPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009 to 2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

Senate Bill 1078, SB 107, and SBX1-2 (Renewable Electricity Standards)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008 Executive Order S-14-08 was signed, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, adopted on March 29, 2011, codifies the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05

Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07

Issued on January 18, 2007, Executive Order S-01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Executive Order S-14-08

Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent of energy to derive from renewable sources by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09

Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California Renewable Portfolio Standard program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15

Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations

The appliance efficiency regulations (California Code of Regulations Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6), was first adopted in June 1977 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and take effect on January 1, 2020. Under the 2019 standards, single family homes would be about 53 percent more energy efficient and nonresidential buildings would be about 30 percent more energy efficient than buildings under the 2016 standards.

Title 24 California Green Building Standards Code.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics.

Regional

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

2017 Clean Air Plan

The 2017 *Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) provides a regional strategy to protect public health and reduce GHG emissions in the Bay Area. The 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that would put the Bay Area on a pathway to achieve those GHG reduction targets. The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Local

Cupertino General Plan

The Cupertino General Plan (Community Vision 2015-2040), includes policies that are relevant to the reduction of GHG emissions and applicable to the proposed project. The policies are identified in Chapter 5, Mobility; Chapter 6, Environmental Resources Sustainability; and Chapter 8, Infrastructure, of the General Plan and listed in Table 4.5-2.

TABLE 4.5-2 GENERAL PLAN POLICIES RELEVANT TO GHG EMISSIONS

Policy Number	Policy
Chapter 5, Mobility Element (M)	
Policy M-8.1	**Greenhouse Gas Emissions.** Promote transportation policies that help to reduce greenhouse gas emissions.
Policy M-8.2	**Land Use.** Support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita Vehicle Miles Traveled (VMT), reducing impacts on the City's transportation network and maintaining the desired levels of service for all modes of transportation.
Policy M-8.5	**Design of new developments.** Encourage new commercial developments to provide shared office facilities, cafeterias, daycare facilities, lunchrooms, showers, bicycle parking, home offices, shuttle buses to transit facilities and other amenities that encourage the use of transit, bicycling or walking as commute modes to work. Provide pedestrian pathways and orient buildings to the street to encourage pedestrian activity.
Policy M-8.6	**Alternative Fuel Charging Stations.** Develop a city-wide strategy to encourage the construction of a network of public and private alternative fuel vehicle charging/ fueling stations

Table 4.5-2 General Plan Policies Relevant to GHG Emissions

Policy Number	Policy
Chapter 6, Environmental Resources and Sustainability (ES)	
Policy ES-1.1	**Principles of Sustainability.** Incorporate the principles of sustainability into Cupertino's planning, infrastructure and development process in order to improve the environment, reduce greenhouse gas emissions and meet the needs of the community without compromising the needs of future generations. ▪ **Strategy ES-1.1.1:** Climate Action Plan (CAP). Adopt, implement and maintain a Climate Action Plan to attain greenhouse gas emission targets consistent with state law and regional requirements. This qualified greenhouse gas emissions reduction plan, by BAAQMD's definition, will allow for future project CEQA streamlining and will identify measures to: • Reduce energy use through conservation and efficiency • Reduce fossil fuel use through multi-modal and alternative transportation • Maximize use of and, where feasible, install renewable energy resources • Increase citywide water conservation and recycled water use • Accelerate Resource Recovery through expanded recycling, composting, extended producer responsibility and procurement practices • Promote and incentivize each of those efforts to maximize community participation and impacts • Integrate multiple benefits of green infrastructure with climate resiliency and adaptation. ▪ **Strategy ES-1.1.2: CAP and Sustainability Strategies Implementation.** Periodically review and report on the effectiveness of the measures outlined in the CAP and the strategies in this Element. Institutionalize sustainability by developing a methodology to ensure all environmental, social and lifecycle costs are considered in project, program, policy and budget decisions. ▪ **Strategy ES-1.1.3: Climate Adaptation and Resiliency.** Conduct a climate vulnerability assessment and set preparedness goals and strategies to safeguard human health and community assets susceptible to the impacts of a changing climate (e.g., increased drought, wildfires, flooding). Incorporate these into all relevant plans, including the Emergency Preparedness Plan, Local Hazard Mitigation Plan, Dam Failure Plan, Climate Action Plan, Watershed Protection Plan, and Energy Assuredness Plan.
Policy ES-1.2	**Regional Growth and Transportation Coordination.** Coordinate with local and regional agencies to prepare updates to regional growth plans and strategies, including the Regional Housing Allocation Needs Allocation (RHNA), One Bay Area Plan, Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS). ▪ **Strategy ES-1.2.1 Local Plan Consistency with Regional Plans.** Update and maintain local plans and strategies so they are consistent with One Bay Area Plan to qualify for State transportation and project CEQA streamlining.
Policy ES-2.1	**Conservation and Efficient Use of Energy Resources.** Encourage the maximum feasible conservation and efficient use of electrical power and natural gas resources for new and existing residences, businesses, industrial and public uses.
Policy ES-3.1	**Green Building Design.** Set standards for the design and construction of energy and resource conserving/efficient building.
Chapter 8, Infrastructure (INF)	
Policy INF-4.13	**Energy and Water Conservation**. Encourage energy and water conservation in all existing and new residential development. ▪ Strategy 1. Enforcement of Title 24. The City will continue to enforce Title 24 requirements for energy conservation and will evaluate utilizing some of the other suggestions as identified in the Environmental Resources/ Sustainability element. ▪ Strategy 2. Sustainable Practices. The City will continue to implement the Landscape Ordinance for water conservation and the Green Building Ordinance that applies primarily to new residential and nonresidential development, additions, renovations, and tenant improvements of ten or more units. To further the objectives of the Green Building Ordinance, the City will evaluate the potential to provide incentives, such as waiving or reducing fees, for energy conservation improvements at affordable housing projects (existing or new) with fewer than ten units to exceed the minimum requirements of the

TABLE 4.5-2 GENERAL PLAN POLICIES RELEVANT TO GHG EMISSIONS

Policy Number	Policy
	California Green Building Code. This City will also implement the policies in its climate action plan to achieve residential-focused GHG emission reductions and further these community energy and water conservation goals.
Policy INF-5.44	**Reducing Waste.** Meet or exceed federal, State and regional requirements for solid waste diversion through implementation of programs. ▪ **Strategy 6. Construction Waste.** Encourage recycling and reuse of building materials during demolition and construction of City, agency and private projects.

Source: Cupertino General Plan (Community Vision 2015-2040).

Cupertino Municipal Code

The Cupertino Municipal Code (CMC) includes various directives to minimize GHG emissions. The provisions related to potential impacts from the proposed project are included in Title 6, Franchises and Title 16, Buildings and Construction, as follows:

- **Chapter 6.24, Garbage, Non-Organic Recycling and Organic Waste Recycling Collection and Disposal.** Section 6.24.037, Mandatory Organic Recycling for Business Structures, includes standards for businesses and multi-family residents to subscribe to and maintain organic material (including food waste) recycling services for each business or individual household in the multi-family dwelling.
- **Chapter 16.58, Green Building Ordinance.** This chapter includes the CALGreen requirements with local amendments for projects in the city. As part of the City's Green Building Ordinance (Section 15.58.220), the City requires new construction over certain sizes (greater than 9 residential units or 25,000 square feet of non-residential development and greater) to build to Leadership in Energy and Environmental Design (LEED) or alternative reference standards. The LEED construction and/or other types of equivalent green building verification systems typically require enhanced building energy efficiency, which reduces heating and cooling requirements of a building and therefore also reduces GHG emissions. Section 15.58.400 requires the installation of Electric Vehicle Supply Equipment for the charging of electric vehicles.
- **Chapter 16.72, Recycling and Diversion of Construction and Demolition Waste.** This chapter establishes regulations to comply with the California Waste Management Act of 1989. The City of Cupertino has adopted construction and demolition debris diversion requirements that are consistent with the new requirements under CALGreen for mandatory construction recycling. Construction and demolition debris recycling requirements vary by project type. Pursuant to the Chapter 16.72, projects that involve the construction, demolition, or renovation of 3,000 square feet or more are required to adhere to the City's construction and demolition diversion requirements. Applicants for any covered project are required to recycle or divert (recycle or salvage) at least 60 percent of all generated construction and demolition debris tonnage. Applicants are required to prepare and submit a Waste Management Plan to the Public Works Department that outlines:
  - The estimated volume or weight of project construction and demolition debris, by material type, to be generated.

  - The maximum volume or weight of such materials that can feasibly be diverted via reuse or recycling.
  - The vendor that the applicant proposes to use to haul the materials (consistent with the provisions of CMC Chapter 6.24).
  - The facility to which the materials will be hauled (approved by the City).
  - The estimated volume or weight of construction and demolition debris that will be land-filled.

Cupertino Climate Action Plan

The Cupertino Climate Action Plan (CAP) is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic goals, measures, and actions to reduce emissions from the energy, transportation and land use, water, solid waste, and green infrastructure sectors. The emissions reduction strategies, developed by the City, follow the BAAQMD's CEQA Guidelines[3] and the corresponding criteria for a "qualified GHG Emissions reduction program" as defined by BAAQMD, which in turn were developed to comply with the requirements of AB 32 and achieve the goals of the CARB Scoping Plan. A qualified GHG emissions reduction program adopted by a local jurisdiction should include the elements below, as described in CEQA Guidelines Section 15183.5. The following BAAQMD's CEQA Guidelines[4] provide the methodology to determine whether a GHG reduction program meets these requirements:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards, which substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

The City's CAP meets BAAQMD guidelines for a qualified GHG emissions reduction program as follows:

- The CAP quantifies citywide GHG emissions, both existing and projected over the specified time period, resulting from activities within the city as defined by the Cupertino General Plan (Community Vision 2015-2040).

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[3] Bay Area Air Quality Management, May 9, 2017, Updated CEQA Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

[4] Bay Area Air Quality Management, May 9, 2017, Updated CEQA Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

- The CAP establishes a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- CAP policy provisions reduce emissions to 15 percent below 2005 levels by 2020.
- CAP policy provisions reduce emissions to 35 percent below 2005 levels by 2030.
- CAP policy provisions provide a foundation for the City to reach the goal of reducing emissions to 80 percent below 1990 levels by 2050.
- The CAP identifies and analyzes the emissions resulting from specific actions or categories of actions anticipated within the city.
- The CAP specifies measures or a group of measures, including performance standards.
- The CAP establishes a mechanism to monitor its progress toward achieving the level and to require amendment if the plan is not achieving specific levels.

The City of Cupertino's CAP was first published in January 2015. The City has since released a 2015 CAP Progress Report, 2015 GHG Inventory Update, 2016 CAP Progress Report, and 2017 CAP Progress Report. The CAP is a strategy to achieve 15 percent reduction in carbon emissions by the year 2020, 49 percent reduction by 2035, and 83 percent by 2050.

The CAP consists of measures that identify the steps the City will take to support reductions in GHG emissions. The GHG reduction measures proposed in the CAP build on the GHG inventory results and key opportunities prioritized by City staff, members from the community, and elected officials. The CAP consists of goals, measures, and actions that identify steps the City will take to support reducing GHG emissions. The City of Cupertino will achieve GHG emission reductions through a mix of voluntary programs and new strategic measures. The standards presented in the CAP respond to the needs of development, avoid unnecessary regulation, streamline new development, and achieve more efficient use of resources. Community-wide goals and measures from the CAP that are applicable to the proposed project are shown in Table 4.5-3 below.

TABLE 4.5-3 CLIMATE ACTION PLAN GOALS AND MEASURES

Number	Goal/Measure
Goal 1	**Reduce Energy Use.** Increase energy efficiency in existing homes and buildings and increase use of renewable energy community-wide.
Measure C-E-5	**Community-wide Solar Photovoltaic Development.** Encourage voluntary community-wide solar photovoltaic development through regulatory barrier reduction and public outreach campaigns.
Goal 2	**Encourage Alternative Transportation.** Support transit, carpooling, walking, and bicycling as viable transportation modes to decrease the number of single occupancy vehicle trips within the community.
Measure C-T-1	**Bicycle & Pedestrian Environment Enhancements**. Continue to encourage multi-modal transportation, including walking and biking, through safety and comfort enhancements in the bicycle and pedestrian environment.
Measure C-T-6	**Transit-Oriented Development.** Continue to encourage development that takes advantage of its location near local transit options (e.g., major bus stops) through higher densities and intensities to increase ridership potential.
Measure C-T-7	**Community-Wide Alternative Fuel Vehicles.** Encourage community-wide use of alternative fuel vehicles through expansion of alternative vehicle refueling infrastructure.
Goal 3	**Conserve Water.** Promote the efficient use and conservation of water in buildings and landscapes.

TABLE 4.5-3 CLIMATE ACTION PLAN GOALS AND MEASURES

Number	Goal/Measure
Measure C-W-1	SB-X7-7. Implement water conservation policies contained within Cupertino's Urban Water Management Plan to achieve 20 percent per capita water reductions by 2020.
Goal 4	Reduce Solid Waste. Strengthen waste reduction efforts through recycling and organics collection and reduced consumption of materials that otherwise end up in landfills.
Measure C-SW-3	Construction and Demolition Waste Diversion Program. Continue to enforce diversion requirements in City's Construction & Demolition Debris Diversion and Green Building Ordinances.

Source: City of Cupertino, 2015, Climate Action Plan.

4.5.1.3 EXISTING CONDITIONS

Priority Development Area/Transit Priority Area

Plan Bay Area 2040 is the current update of the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS), which was adopted jointly by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) on July 26, 2017. As part of the implementing framework for *Plan Bay Area*, local governments, including Cupertino, have identified Priority Development Areas (PDAs) to focus growth.[5] PDAs are transit-oriented, infill development opportunity areas within existing communities. In addition to PDAs, *Plan Bay Area* identifies Transit Priority Areas (TPAs), which are areas within one-half mile of a major transit stop (15 minute or less service level frequency) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.

An overarching goal of *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve reductions of per capita passenger vehicle trips, vehicle miles traveled (VMT), and associated GHG emissions.

The project site is located in a Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas PDA. Because the proposed project is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes, it is also a designated TPA.[6]

Renewable Energy

The current project site is served by both electricity and natural gas connections. Electricity is supplied to the project site via infrastructure maintained by Pacific Gas & Electric (PG&E). Silicon Valley Clean Energy (SVCE), a locally controlled public agency that has a partnership with PG&E, supplies the electricity to the project site. SVCE provides a standard 50 percent renewable energy portfolio, in addition to a 100 percent

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[5] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-7.

[6] *Plan Bay Area*, Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining, https://www.planbayarea.org/pda-tpa-map, accessed on July 11, 2019.

renewable option that electricity customers can opt into. Natural gas and associated infrastructure are provided and maintained by PG&E.

Existing Emissions

The project site is developed with an approximately 71,250 square-foot shopping center with retail stores, offices, and restaurants that is currently about 85 occupied (or 60,563 square feet) that generate GHG emissions from natural gas use for energy, heating and cooking, vehicle trips associated with the land uses, as well as area sources such as landscaping equipment and consumer cleaning products. The site also generates indirect GHG emissions associated with electricity use, water use and wastewater generation and solid waste disposal. Existing GHG emissions are shown in Table 4.5-4.

TABLE 4.5-4 EXISTING GREENHOUSE GAS EMISSIONS

Category	Existing (MTCO2e)[a]	Percent Total[b]
Area	<1	<1%
Energy	232	16%
On-Road Mobile Sources[c]	1,214	82%
Waste[d]	19	1%
Water/Wastewater	19	1%
Total	1,484	100%

Notes:
a. Emissions were calculated using CalEEMod.
b. Emissions may not total 100 percent due to rounding.
c. The mobile emissions modeled CalEEMod emissions are based on the project total daily trip generation of 2,174 vehicles. Credit for internal trip capture and proximity to transit was applied in the CalEEMod mitigation module (i.e., land use and site enhancement, increase density, and increase diversity). These measures were applied in accordance with the criteria within the California Air Pollution Control Officers Association (CAPCOA), *Quantifying Greenhouse Gas Mitigation Measures* (2010) guidance, and the CalEEMod User's Guide.
d. The waste source emissions include compliance with AB 939 requiring 50 percent diversion of the solid waste stream.
Source: Kimley-Horn and Associates, PlaceWorks, 2019.

4.5.2 THRESHOLDS OF SIGNIFICANCE

4.5.2.1 CEQA GUIDELINES APPENDIX G

The proposed project would result in a significant impact related to GHG emissions if it would:

1. Generate GHG emissions, either directly or indirectly, that may a significant effect on the environment.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

4.5.2.2 BAAQMD SIGNIFICANCE CRITERIA

BAAQMD has a tiered approach for assessing GHG emissions impacts of a project. If a project is within the jurisdiction of an agency that has a "qualified" GHG reduction strategy, the project can assess consistency of its GHG emissions impacts with the reduction strategy. BAAQMD has adopted screening criteria and significance criteria for development projects that would be applicable for the proposed project. If a project exceeds the BAAQMD Guidelines' GHG screening-level sizes, the proposed project would be required to conduct a GHG emissions analysis using the BAAQMD significance criteria of 1,100 million metric tons of carbon dioxide equivalent per year per year ($MTCO_2e$ per year).

4.5.3 IMPACT DISCUSSION

4.5.3.1 IMPACT ANALYSIS

GHG-1 The proposed project would not directly or indirectly generate GHG emissions that may have a significant impact on the environment.

The proposed project would include direct and indirect GHG emissions. Direct operational-related GHG emissions for the proposed project would include emissions from area and mobile sources, while indirect emissions are from energy consumption, water demand, and solid waste.

Construction Emissions

Construction of the proposed project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment and the transport of materials and construction workers to and from the project site. Construction GHG emissions are typically summed and amortized over the lifetime of the proposed project (industry standards assume 30 years), then added to the operational emissions.[7] BAAQMD does not have a threshold for construction GHG emissions. Total GHG emissions generated during all phases of construction were combined and are presented in Table 4.5-5. As shown in Table 4.5-5, the proposed project construction when amortized over 30 years would not exceed BAAQMD's threshold of 1,100 $MTCO_2e$ per year. Construction emissions would be *less than significant*.

TABLE 4.5-5 PROPOSED PROJECT CONSTRUCTION PHASE GREENHOUSE GAS EMISSIONS

Category	Construction GHGs ($MTCO_2e$)[a]
Total Mitigated Construction Emissions (2019-2020)	1,730
30-Year Amortized Construction	58
BAAQMD Bright-Line Threshold	1,100 $MTCO_2e$/year
Exceeds BAAQMD Thresholds?	No

Source: Kimley-Horn and Associates, PlaceWorks, 2019.

Operational Emissions

Operational or long-term emissions occur over the life of the proposed project. GHG emissions would result from direct emissions such as project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment. Operational GHG emissions would also result from indirect

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[7] The proposed project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13, August 26, 2009).

sources, such as off-site generation of electrical power over the life of the project, the energy required to convey water to, and wastewater from the project site, the emissions associated with solid waste generated from the project site, and any fugitive refrigerants from air conditioning or refrigerators. Table 4.5-6 summarizes the total GHG emissions associated with proposed project. As shown, the proposed project would generate 1,843 $MTCO_2e$ per year. However, because, the project site is currently developed with approximately 71,250 square-feet of shopping center, which generates 1,484 $MTCO_2e$ per year, the proposed project's emissions would represent a net increase in GHG emissions of 359 $MTCO_2e$ per year. The proposed project would not result in an increase in GHG emissions that exceed the BAAQMD's bright-line screening threshold of 1,100 $MTCO_2e$ per year. Therefore, project related GHG emissions would be *less than significant*.

TABLE 4.5-6 PROPOSED PROJECT GREENHOUSE GAS EMISSIONS

Category	$MTCO_2e$ [a]		
	Existing	Project	Net Change
Area[b]	<1	8	8
Energy	232	648	416
On-Road Mobile Sources[c]	1,214	1,102	-112
Waste[d]	19	33	14
Water/Wastewater	19	51	32
Total[e]	1,484	1,843	359
BAAQMD Bright-Line Threshold	NA	NA	1,100 $MTCO_2e$/year
Exceeds BAAQMD Thresholds?	NA	NA	No

Notes: NA: not applicable

a. Emissions were calculated using CalEEMod.Notes: Emissions may not total to 100 percent due to rounding.

b. The area source emissions include compliance with BAAQMD Regulation 6, Rule 3 (Wood Burning Devices) and were applied in the mitigation tab of CalEEMod.

c. The mobile emissions modeled CalEEMod emissions are based on the project total daily trip generation of 2,174 vehicles. Credit for internal trip capture and proximity to transit was applied in the CalEEMod mitigation module (i.e., land use and site enhancement, increase density, and increase diversity). These measures were applied in accordance with the criteria within the California Air Pollution Control Officers Association (CAPCOA), *Quantifying Greenhouse Gas Mitigation Measures* (2010) guidance, and the CalEEMod User's Guide.

d. The waste source emissions include compliance with AB 939 requiring 50 percent diversion of the solid waste stream.

e. Emissions may not total to 100 percent due to rounding.

Source: Kimley-Horn and Associates, PlaceWorks, 2019.

Significance Without Mitigation: Less than significant

GHG-2 The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The following discusses the proposed project consistency with applicable plans adopted for the purpose of reducing GHG emissions, which include CARB's 2017 Scoping Plan, MTC/ABAG's *Plan Bay Area* 2040, and Cupertino's CAP.

2017 Scoping Plan

The 2017 Scoping Plan contains the State's strategy for reducing the State's GHG emissions to 40 percent below 1990 levels by 2030 pursuant to SB 32. The CARB Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

The proposed project's GHG emissions shown in Table 4.5-6 above include reductions associated with statewide strategies such as the Pavley I motor vehicle emission standards, the Low Carbon Fuel Standard, and the 2016 Energy Efficiency Standards. However, the modeling does not incorporate reductions from the Pavley II (LEV III) Advanced Clean Cars Program (extends to model year 2025), the Renewable Portfolio Standards, CALGreen Standards for indoor water use, or the California Model Water Efficient Landscape Ordinance (outdoor water), or the latest 2019 Energy Efficiency Standards (effective January 1, 2020). Therefore, actual emissions would be lower than those shown in Table 4.5-6 with the implementation of the mandatory statewide reduction strategies. Furthermore, the proposed project would develop new buildings that would replace older buildings and would be required achieve the latest Building Energy Efficiency Standards, comply with CMC Chapter 16.58 (Green Building Ordinance), and would be required to build to LEED or an alternative reference standard. Accordingly, the proposed project would not conflict with any statewide strategies to reduce GHG emissions. Therefore, impacts would be *less than significant* in this regard.

Plan Bay Area

As discussed in Section 4.5.1.3, Existing Conditions, the project site is located in the Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas PDA. Because the proposed project is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes, it is also a designated TPA.[8] Because the proposed project is an infill residential mixed-use development it would be consistent with the overall goals of *Plan Bay Area* 2040*.* As previously described an overarching goal of *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure, instead of locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Accordingly, the proposed project would not conflict with the land use concept plan in *Plan Bay Area* 2040 and impacts would be *less than significant*.

Cupertino Climate Action Plan

As discussed in Section 4.5.1.2, Regulatory Framework, the Cupertino CAP identifies sources of GHG emissions within the city's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic goals, measures, and actions to reduce emissions. Furthermore, as described in Section 4.5.1.2, the Cupertino CAP is a qualified GHG reduction program.

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[8] *Plan Bay Area*, Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining, https://www.planbayarea.org/pda-tpa-map, accessed on July 11, 2019.

The proposed project would be consistent with the overall goals of the Cupertino CAP, which is the City's strategic planning document to reduce GHG emissions. As an infill project on a currently developed site within a designated PDA and TPA (CAP Measure C-T-6, Transit-Oriented Development), the proposed project would support efforts to reduce GHG emissions from VMT (CAP Goal 1, Reduce Energy Use). Consistent with CAP Measure C-T-1, Bicycle & Pedestrian Environment Enhancements, the proposed project would implement the City's 2016 *Bicycle Transportation Plan* and install a Class IV separated bikeway on Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp, and a signal control for the westbound right turn movement to improve bike and pedestrian safety, thus, promoting these alternative modes of transportation. The proposed new buildings would achieve the current Building Energy Efficiency Standards and would be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems that would improve energy efficiency. The proposed buildings would comply with Title 24 solar requirements and would meet solar ready standards. While the requirements under Title 24 do not require installation of solar-energy systems, buildings are required to be built to accept the installation of such a system. CAP Measures C-E-5, Community-wide Solar Photovoltaic Development, also encourages voluntary community-wide solar photovoltaic development. Additionally, pursuant to CMC Chapter 16.58 (Green Building Ordinance), the proposed project would be required to build to LEED or an alternative reference standard (CAP Goal 1, Reduce Energy Use) and install Electric Vehicle Supply Equipment for the charging of electric vehicles (CAP Measure C-T-7, Community-Wide Alternative Fuel Vehicles). Consistent with CAP Measure C-W-1, SB-X7-7, the proposed project would comply with SB X7-7, which requires California to achieve a 20 percent reduction in urban per capita water use by 2020. The proposed project would implement best management practices for water conservation to achieve the City's water conservation goals. Water conservation would indirectly contribute to reducing GHG emissions. If less water is used, fewer resources (namely energy) will be used to source, distribute, and treat the water. Since energy consumption leads to the generation of GHG emissions, using fewer resources would help to reduce GHG emissions overall. Furthermore, consistent with CAP Measure C-SW-3, Construction and Demolition Waste Diversion Program, the proposed project would comply with the City's Construction and Demolition Debris Diversion Ordinance, which requires applicable construction projects to divert 60 percent of construction waste. Prior to receiving a final building inspection, a construction recycling report would be submitted to show the tons recycled and disposed by material type. As an infill redevelopment priority housing development on a designated PDA and TPA the proposed project would be consistent with the overall intent of the CAP to support reductions in GHG emissions and the proposed project would not conflict any goals or measures to reduce GHG emissions in the CAP and impacts would be *less than significant*.

Summary

In summary, the proposed project, an infill and mixed-use project within a currently developed area would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions.

Significance Without Mitigation: Less than significant.

4.5.4 CUMULATIVE IMPACTS

GHG-3 The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to GHG emissions.

As described above, GHG emissions related to the proposed project are not confined to a particular air basin but are dispersed worldwide. Therefore, the analysis under impact discussion GHG-1 and GHG-2 above, also addresses cumulative impacts.

Significance Without Mitigation: Less than significant.

4.6 HAZARDS & HAZARDOUS MATERIALS

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) it was determined that operation of the proposed project would not result in significant environmental impacts related to release and transport of hazardous materials, be located on a hazardous materials site,[1] cause an airport-related hazard, obstruct an emergency plan, or expose people to wildland fires. Therefore, this chapter only includes an evaluation of potential consequences associated with construction of the proposed project that are related to the transport and disposal of hazardous materials, and hazardous materials in proximity to schools. This chapter also describes the environmental setting, including regulatory framework and existing conditions, and identifies mitigation measures, if required, that would avoid or reduce significant impacts.

Some of the information in this chapter was derived from a *Limited*[2] *Environmental Site Characterization (ESC)* dated January 28, 2016, prepared by Langan Treadwell Rollo. A copy of this report is included in Appendix F, Limited Environmental Site Characterization, of this Draft EIR. A third-party peer review of this report was completed by PlaceWorks.

4.6.1 ENVIRONMENTAL SETTING

4.6.1.1 REGULATORY FRAMEWORK

Hazardous materials refer generally to hazardous substances, hazardous waste, and other materials that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (e.g., household cleaners, industrial solvents, paint, pesticides) and in the manufacturing of products (e.g., electronics, newspapers, plastic products). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, commercial, and industrial uses; businesses; hospitals; and households. Accidental releases of hazardous materials have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents.

The term "hazardous materials," as used in this chapter, includes all materials defined in the California Health and Safety Code:

> "A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released

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[1] California Department of Toxic Substances Control EnviroStor Database, https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=21267+Stevens+Creek+Boulevard, accessed July 2019; PIERS Environmental Services, 2015. Phase 1 Environmental Site Assessment, 21255-21275 Stevens Creek Boulevard, Cupertino, CA, dated September 18, 2015; EBI Consulting, 2007, Phase 1 Environmental Site Assessment, The Oaks Shopping Center, Cupertino, California, dated March 14, 2007.

[2] The term "limited" is not defined by the American Society for Testing and Materials. The term in this context indicates that site investigation is not under the oversight of a regulatory agency and was implemented primarily for due diligence purposes based on site history and future land use plans.

> into the workplace or the environment. 'Hazardous materials' include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment."[3]

The term includes chemicals regulated by the United States Department of Transportation (USDOT), the United States Environmental Protection Agency (USEPA), the California Department of Toxic Substances Control (DTSC), the California Governor's Office of Emergency Services (CalOES), and other agencies as hazardous materials, hazardous wastes, or hazardous substances. "Hazardous waste" is any hazardous material that has been discarded, except those materials specifically excluded by regulation. Hazardous materials that have been intentionally disposed of or inadvertently released fall within the definition of "discarded" materials and can result in the creation of hazardous waste. Hazardous wastes are broadly characterized by their ignitability, toxicity, corrosivity, reactivity, radioactivity, or bioactivity. Federal and State hazardous waste definitions are similar but contain enough distinctions that separate classifications are in place for federal Resource Conservation and Recovery Act (RCRA) hazardous wastes and State non-RCRA hazardous wastes. Hazardous wastes require special handling and disposal because of their potential to impact public health and the environment. Some materials are designated "acutely" or "extremely" hazardous under relevant statutes and regulations.

Hazardous materials and wastes can pose a significant actual or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, State, and local programs that regulate the use, storage, and transportation of hazardous materials and hazardous waste are in place to prevent these unwanted consequences. These regulatory programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

Federal

The following federal agencies oversee hazards and hazardous materials concerns.

United States Environmental Protection Agency

The USEPA laws and regulations ensure the safe production, handling, disposal, and transportation of hazardous materials. Laws and regulations established by the USEPA are enforced in Santa Clara County by the California Environmental Protection Agency (CalEPA).

United States Department of Transportation

The USDOT has the regulatory responsibility for the safe transportation of hazardous materials between states and to foreign countries. The USDOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by United States Postal Service regulations. The federal Resource Conservation and Recovery Act of 1976 imposes additional standards for the transport of hazardous wastes.

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[3] California Health and Safety Code Section 25501(n)(1).

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) oversees the administration of the Occupational Safety and Health Act, which requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from materials manufacturers. The material safety data sheets describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

State

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 and California Code of Regulations, Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on-site. A business which uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

California Environmental Protection Agency

One of the primary agencies that regulates hazardous materials is the CalEPA. The State, through CalEPA, is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. The California DTSC, a department of the CalEPA, protects California and Californians from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and Safety Code.[4] The DTSC requirements include the need for written programs and response plans, such as Hazardous Materials Business Plans. The DTSC programs include dealing with aftermath clean-ups of improper hazardous waste management, evaluation of samples taken from sites, enforcement of regulations regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

California Division of Occupational Safety and Health

Like OSHA at the federal level, the California Division of Occupational Safety and Health (CalOSHA) is the responsible State-level agency for ensuring workplace safety. The CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event that a site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

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[4] Hazardous Substance Account, Chapter 6.5 (Section 25100 et seq.) and the Hazardous Waste Control Law, Chapter 6.8 (Section 25300 et seq.) of the Health and Safety Code.

California Department of Transportation and California Highway Patrol

Two State agencies have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies: the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highway and freeway lanes and intercity rail services.

The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the State.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

Regional

San Francisco Bay Regional Water Quality Control Board

The Porter-Cologne Water Quality Act[5] established the State Water Resources Control Board (SWRCB) and divided the State into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The Regional Water Quality Control Board for the San Francisco Bay Region (Region 2) is the Regional Water Quality Control Board (San Francisco Bay RWQCB) that regulates water quality in Cupertino. The San Francisco Bay RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remedial actions, if necessary.

Local

Cupertino General Plan

The Cupertino General Plan (Community Vision 2015-2040), includes a policy that is relevant to the safe handling of hazardous materials and applicable to the proposed project. The policy is identified in Chapter 7, Health and Safety, of the General Plan and listed in Table 4.6-1.

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[5] California Water Code Sections 13000 *et seq.*

TABLE 4.6-1 GENERAL PLAN POLICY RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS

Policy Number	Policy
Chapter 7, Health and Safety (HS)	
Policy HS-6.1	**Hazardous Materials Storage and Disposal.** Require the proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fire or the release of harmful fumes. Maintain information channels to the residential and business communities about the illegality and danger of dumping hazardous material and waste in the storm drain system or in creeks.

Source: Cupertino General Plan (Community Vision 2015-2040).

4.6.1.2 EXISTING CONDITIONS

The 8.1-acre project site is currently developed with a one-story shopping center (The Oaks Shopping Center) consisting of five occupied buildings with retail stores and restaurants, which was built between 1973 and 1976. The closest school, De Anza College, a community college, is located approximately 140 feet to the south, directly across from the project site. The nearest daycares are Cupertino Child Care located 0.30 miles to the northeast; Village Little Preschool Center located 0.35 miles to the east; and Buzy Tots Childcare and Preschool located approximately 0.25 miles to the southeast. There are no other existing or proposed schools or daycares within 0.25 miles of the project site.

As previously stated, a Limited ESC was prepared for the project site (see Appendix F of this Draft EIR). The purposed of the ESC was to conduct soil sampling and analysis to assess the potential for soil contamination resulting from past and/or present site activities and nearby off-site operations. Because the proposed project will require the export of 69,000 cubic yards of cut to accommodate the one-level subterranean parking garage below Residential-Retail Building 1, the objective of the ESC was to preliminarily characterize the soil to assist in the off haul of excavated material from the site. A total of twelve soil samples were submitted to a state-certified laboratory. The testing was performed to satisfy soil profiling scenarios generally accepted by landfills. The soil samples were analyzed for some or all of the following: total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs), California assessment metals (CAM) 17 metals, and leaking underground fuel tank (LUFT) 5 metals. The ESC did not find any elevated concentrations of hazardous waste exceeding federal or State levels, and no contaminated or hazardous materials were encountered.

4.6.2 THRESHOLDS OF SIGNIFICANCE

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process, it was determined that development of the proposed project would not result in significant environmental impacts related to the following significance standards and, therefore, are not discussed in this chapter.

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people living or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Based on the Initial Study and comments received during the scoping process it was determined that the proposed project could result in a potentially significant impact related to hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.
2. Emit hazardous emissions or handle hazardous materials, substances or waste within 0.25 miles of an existing or proposed school.

4.6.3 IMPACT DISCUSSION

HAZ-1	**The proposed project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials during construction.**

Project Construction

Construction activities would include the use of materials such as fuels, lubricants, and greases in construction equipment and coatings used in construction. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short-term or one time in nature and would cease upon completion of the proposed project’s construction phase. The use, storage, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner to minimize the potential for safety impacts.

As described in Section 4.6.1.2, Existing Conditions, because the proposed project will require the export of 69,000 cubic yards of soil to accommodate the one-level subterranean parking garage below Residential-Retail Building 1, the objective of the soil testing conducted on the project site was to preliminarily characterize the soil to assist in the off haul and disposal of excavated material from the site. Based on the analytical results from the ESC, none of the soils at the project site that are proposed to be excavated for off-site disposal contain elevated concentrations exceeding federal or State hazardous waste levels. Therefore, soils removed from the site during excavation activities would be disposed of at a landfill as unrestricted waste and impacts would be less than significant.

Significance Without Mitigation: Less than significant.

HAZ-2 **The proposed project would not emit hazardous emissions or handle hazardous materials, substances or waste within 0.25 miles of an existing or proposed school.**

De Anza College is located directly south of Stevens Creek Boulevard, within 140 feet of the project site. In addition, one pre-school is located within 0.25-miles of the project site. As described under impact discussion HAZ-1, impacts related to potentially contaminated soils would be less than significant. Also see Chapter 4.1, Air Quality, impact discussion AQ-3, which concludes that the potential for impacts to sensitive receptors due the release of hazardous materials during construction would be less than significant. Therefore, the proposed project would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school, and impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.6.4 CUMULATIVE IMPACTS

HAZ-3 **The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to hazards and hazardous materials.**

As described under impact discussion HAZ-1, activities associated with grading, excavation, and the hauling and disposal of soils during the construction phase of the proposed project would not create a significant hazard to the public or the environment through the transport or disposal of hazardous materials. Because impacts associated with the transport of hazardous materials during construction, are, by their nature, focused on specific sites or areas, the significant-but-mitigable impact on the project site associated with the excavation, hauling, and disposal of potentially contaminated soils would not contribute to a cumulative increase in hazards in the city. Therefore, the potential for cumulative impacts associated with safety and hazards during construction or handling of hazardous materials in close proximity to schools would be *less than significant*.

Significance With Mitigation: Less than significant.

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4.7 NOISE

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) and comments received in the scoping process, it was determined that construction and operation of the proposed project would not result in significant environmental impacts related to airport noise. Therefore, this chapter includes an evaluation of the potential environmental consequences from potential increases in ambient noise levels and groundborne noise levels. This chapter also describes the environmental setting, including regulatory framework and existing noise conditions in the project area, and identifies mitigation measures that would avoid or reduce significant impacts.

The analysis in this chapter is based in part on the *Acoustical Assessment for the proposed Westport Project, in the City of Cupertino, California*, dated July 2019, prepared by Kimley-Horn and Associates. A complete copy of this report is located in Appendix G, Acoustical Assessment, of this Draft EIR. A third-party peer review of this report was completed by PlaceWorks.

4.7.1 ENVIRONMENTAL SETTING

4.7.1.1 OVERVIEW OF NOISE FUNDAMENTALS

Noise Descriptors

The following are brief definitions of terminology used in this section:

- **Sound.** A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unit-less measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level, energy averaged over the measurement period.
- **Statistical Sound Level (L_n).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The L_{90} is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 a.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.
- **Peak Particle Velocity (PPV)**. The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), pitch (frequency), and duration. The standard unit of measurement of the loudness of sound is the decibel (dB).

Changes of 1 to 3 dB are detectable under quiet, controlled conditions and changes of less than 1 dB are usually indiscernible. A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernable to most people in an exterior environment whereas a 10 dB change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies and, therefore, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) approximates the sensitivity of the human ear by weighting certain frequencies greater than others.

Unlike linear units, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. This logarithmic scale is used to better account for the large variations in pressure amplitude. In practical application, an increase of 10 dB is 10 times more intense than 1 dB, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system provides a usable scale to characterize the physical degree of magnitude of sound pressure levels and their perceived loudness to the human ear.

To help relate noise level values to common experience, Table 4.7-1 shows typical noise levels from noise sources. Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. For a single point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by onsite operations from stationary equipment or activity at a project construction site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dB for each doubling of distance.

TABLE 4.7-1 TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans), 2013, *Technical Noise Supplement.*

Vibration Fundamentals

Vibration is an oscillating motion in earth. Like noise, vibration is transmitted in waves, but in this case through earth or solid objects. Unlike noise, vibration is typically characterized by lower frequencies that are felt rather than heard. Vibration can be either natural (as in the form of earthquakes, volcanic eruptions, or landslides) or man-made (as from explosions, heavy machinery, or trains). Both natural and man-made vibration may be continuous, such as from operating machinery, or impulsive, as from an explosion or impact pile driver. Typically, particle velocity (measured in inches or millimeters per second) is used to describe vibration and its potential effect on structures. Table 4.7-2 presents the expected human reaction and potential effect on buildings from various levels of peak particle velocity (PPV).

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition, as well as the frequency of the wave.

TABLE 4.7-2 HUMAN REACTION TO TYPICAL VIBRATION LEVELS

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006 to 0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Amplitude at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Note: in/sec = inches per second
Source: California Department of Transportation (Caltrans), 2013, *Transportation and Construction Vibration Guidance Manual*.

4.7.1.2 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging, as well as intrusive noise levels, the federal government, State, various county governments, and most municipalities in the State have established standards and ordinances to control noise. Those that apply to the proposed project are described below.

Federal

The City does not set quantitative vibration level standards. However, the Federal Transit Administration (FTA) provides criteria for acceptable levels of ground-borne vibration for various types of buildings that are sensitive to vibration, and these guidelines are often used to evaluate vibration impacts during construction. The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively. However, structures amplify groundborne vibration, and wood-frame buildings such as typical residential structures are more affected by ground vibration than heavier buildings. The most conservative estimates are reflected in the FTA standards, shown in Table 4.7-3.

TABLE 4.7-3 GROUNDBORNE VIBRATION CRITERIA: ARCHITECTURAL DAMAGE

	Building Category	PPV (in/sec)
I.	Reinforced concrete, steel, or timber (no plaster)	0.50
II.	Engineered concrete and masonry (no plaster)	0.30
III.	Non-engineered timber and masonry buildings	0.20
IV.	Buildings extremely susceptible to vibration damage	0.12

Note: PPV = peak particle velocity.
Source: Federal Transit Administration (FTA), 2018, *Transit Noise and Vibration Impact Assessment*.

Because Cupertino does not have an adopted standard, the threshold of 0.20 inches per second (in/sec) peak particle velocity (PPV) is the standard applied to typical residential structures surrounding the project site in the impact discussion in Section 4.7.3 below. According to California Department of Transportation (Caltrans), this measurement is also the level at which vibrations may begin to annoy people inside buildings.[1]

State

California Building Code, Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.11.2, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior environmental noise sources in multi-family residential units be limited to 45 dBA Ldn/CNEL in any habitable room. The California Green Building Standards Code (CALGreen) has requirements for insulation that affect exterior-interior noise transmission for non-residential structures.

Local

Cupertino General Plan

The Cupertino General Plan (Community Vision 2015-2040), includes policies that are relevant to noise and applicable to the proposed project. The policies are identified in Chapter 3, Land Use and Community Character Element, and Chapter 7, Health and Safety Element, of the General Plan and listed below in Table 4.7-4

TABLE 4.7-4 GENERAL PLAN POLICIES RELEVANT TO NOISE

Policy Number	Policy
Chapter 3, Land Use and Community Character (LU) Element	
Policy LU-13.7	**Streetscape and Connectivity.** Create a walkable and bikeable boulevard with active uses and a distinct image for each subarea. ▪ **Strategy LU-13.7.5: Neighborhood Buffers**. Consider buffers such as setbacks, landscaping and/or building transitions to buffer abutting single family residential areas from visual and noise impacts.

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[1] California Department of Transportation, September 2013, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.

TABLE 4.7-4 GENERAL PLAN POLICIES RELEVANT TO NOISE

Policy Number	Policy
Policy LU-27.8	**Protection.** Protect residential neighborhoods from noise, traffic, light, glare, odors and visually intrusive effects from more intense development with landscape buffers, site and building design, setbacks and other appropriate measures.
Chapter 7, Health and Safety (HS) Element	
Policy HS-8.1	**Land Use Decision Evaluation.** Use the Land Use Compatibility for Community Noise Environments chart, the Future Noise Contour Map (see Figure D-2 in Appendix D) and the City Municipal Code to evaluate land use decisions.
Policy HS-8.2	**Building and Site Design.** Minimize noise impacts through appropriate building and site design. ▪ **Strategy HS-8.2.1**: **Commercial Delivery Areas.** Locate delivery areas for new commercial and industrial developments away from existing or planned homes. ▪ **Strategy HS-8.2.2: Noise Control Techniques.** Require analysis and implementation of techniques to control the effects of noise from industrial equipment and processes for projects near low- intensity residential uses. ▪ **Strategy HS-8.2.3: Sound Wall Requirements.** Exercise discretion in requiring sound walls to be sure that all other measures of noise control have been explored and that the sound wall blends with the neighborhood. Sound walls should be designed and landscaped to fit into the environment.
Policy HS-8.3	**Construction and Maintenance Activities.** Regulate construction and maintenance activities. Establish and enforce reasonable allowable periods of the day, during weekdays, weekends and holidays for construction activities. Require construction contractors to use the best available technology to minimize excessive noise and vibration from construction equipment such as pile drivers, jack hammers, and vibratory rollers.
Policy HS-8.4	**Freeway Design and Neighborhood Noise.** Ensure that roads and development along Highway 85 and Interstate 280 are designed and improved in a way that minimizes neighborhood noise.
Policy HS-8.5	**Neighborhoods.** Review residents' needs for convenience and safety and prioritize them over the convenient movement of commute or through traffic where practical.
Policy HS-8.6	**Traffic Calming Solutions to Street Noise.** Evaluate solutions to discourage through traffic in neighborhoods through enhanced paving and modified street design. ▪ **Strategy HS-8.6.1: Local Improvement.** Modify street design to minimize noise impact to neighbors.
Policy HS-8.7	**Reduction of Noise from Trucking Operations.** Work to carry out noise mitigation measures to diminish noise along Foothill and Stevens Creek Boulevards from the quarry and cement plant trucking operations. These measures include regulation of truck speed, the volume of truck activity, and trucking activity hours to avoid late evening and early morning. Alternatives to truck transport, specifically rail, are strongly encouraged when feasible. ▪ **Strategy HS-8.7.1: Restrictions in the County's Use Permit.** Coordinate with the County to restrict the number of trucks, their speed and noise levels along Foothill and Stevens Creek Boulevards, to the extent allowed in the Use Permit. Ensure that restrictions are monitored and enforced by the County. ▪ **Strategy HS-8.7.2: Road Improvements to Reduce Truck Impacts.** Consider road improvements such as medians, landscaping, noise attenuating asphalt, and other methods to reduce quarry truck impacts.

Source: Cupertino General Plan (Community Vision 2015-2040).

Most cities and counties in California have adopted noise and land use compatibility criteria based on the general assumption that lower noise levels should be achieved in residential areas, with higher noise levels acceptable in business districts, and industrial areas considered appropriate for noise levels up to or exceeding 70 dBA CNEL. Chapter 7, Health and Safety (HS) Element, of the General Plan presents a Land Use Noise Compatibility Matrix in Figure HS-8, Land Use Compatibility for Community Noise Environments, that identifies clearly acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. Appendix D, Community Noise Fundamentals, of the General Plan, includes Figure D-2, Future Noise Contours, that illustrates the acceptable noise levels for the buildout of the General Plan.

With the Supreme Court decision regarding the assessment of the environment's impacts on proposed projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while the noise from existing sources is taken into account as part of the baseline, the direct effects of exterior noise from nearby noise sources as they pertain to land use compatibility of the proposed project is no longer a required topic for impact evaluation under CEQA. Nonetheless, for the complete understanding of the public, this noise analysis will discuss noise compatibility as it applies to the development of the proposed project. No determination of significance is required.

Cupertino Municipal Code

The Cupertino Municipal Code (CMC) includes various directives to minimize adverse impacts to noise. The provisions related to potential impacts from the proposed project are included in Title 10, Public Peace, Safety, and Morals, as follows:

- **Chapter 10.48, Community Noise Control**. The City's noise regulations are implemented and enforced through this chapter, which establishes citywide standards to regulate noise.
    - **Exterior Noise Limits.** CMC Section 10.48.040 states that no person shall create noise located on a property that causes the noise level at a nearby property to exceed the applicable limits set forth in Table 4.7-5. The CMC defines "daytime" as the period from 7:00 a.m. to 8:00 p.m. on weekdays, and 9:00 a.m. to 6:00 p.m. on weekends. "Nighttime" is defined as the period from 8:00 p.m. to 7:00 am on weekdays, and 6:00 p.m. to 9:00 a.m. on weekends.

TABLE 4.7-5 Municipal Code Exterior Noise Limits (dBA)

Land Use Type	Daytime	Nighttime
Residential	60	50
Non-Residential	65	55

Source: City of Cupertino Municipal Code, Section 10.48.040

Additionally, Section 10.48.050 includes a correction for allowable daytime incidents, provided that the sum of the limit and the duration of the exceedance does not exceed 20 dBA (e.g., 5 dB above the limit is allowed for 15 minutes; 5+15=20), as shown in Table 4.7-6.

TABLE 4.7-6 Brief Daytime Incident Corrections

Increment Above Normal Standard	Duration in 2-Hour Period
5 dBA	15 minutes
10 dBA	10 minutes
15 dBA	5 minutes
19 dBA	1 minute

Source: City of Cupertino Municipal Code, Section 10.48.050

- **Interior Noise Limits.** CMC Section 10.48.054 states that noise produced in any multiple-family dwelling unit shall not produce a noise level that, when measured at five feet from any wall in any adjoining unit, exceeds 45 dBA from 7:00 a.m. to 10:00 p.m., or 40 dBA from 10:00 p.m. to 7:00 a.m.

- **Landscape Maintenance Activities Noise.** CMC Section 10.48.051 limits the hours of landscape maintenance activities from 8:00 a.m. to 8:00 p.m. on weekdays, and 9:00 a.m. to 6:00 p.m. on weekends and holidays, excluding public facilities which are allowed to begin at 7:00 a.m. During these hours, noise from the use of motorized equipment for landscape maintenance activities is allowed to exceed the maximum permissible noise limits of CMC Section 10.48.040, provided that the equipment is outfitted with appropriate mufflers and is operated over the minimal period necessary.
- **Construction Noise.** The City provides an exemption for this type of noise. According to CMC Section 10.48.053, grading, construction and demolition activities shall be allowed to exceed the noise limits of CMC Section 10.48.040 during daytime hours (i.e., weekdays from 7:00 a.m. to 8:00 p.m.; weekends from 9:00 a.m. to 6:00 p.m.); provided, that the equipment utilized has high-quality noise muffler and abatement devices installed and in good condition, and the activity meets one of the following two criteria:

  1. No individual device produces a noise level more than 87 dBA at a distance of 25 feet; or
  2. The noise level on any nearby property does not exceed 80 dBA.

  Except for emergency work, construction activities including grading, street construction, demolition, or underground utility work are not permitted within 750 feet of a residential area on Saturdays, Sundays, and holidays, and during the nighttime period. Construction activities, other than street construction, are prohibited on holidays. In addition, construction activities, other than street construction, are prohibited during nighttime periods unless they meet the City's nighttime maximum permissible noise level standards.

4.7.1.3 EXISTING CONDITIONS

Noise Measurements

To determine ambient noise levels in the project area, four 10-minute noise measurements were taken using a 3M SoundPro DL-1 Type I integrating sound level meter between 10:53 a.m. and 11:55 a.m. on May 1, 2018. The Appendix A of the acoustical assessment prepared for the proposed project, provided in Appendix G of this Draft EIR, includes the existing noise measurement data and the location of the noise measurements, shown on Exhibit 5. The four locations were selected for the following reasons:

- Noise Measurement #1 was taken to represent the ambient noise level north of the project site near the existing apartment complex;
- Noise Measurement #2 was taken to represent the ambient noise level east of the project site near the Senior Center;
- Noise Measurement #3 was taken to represent the ambient noise level south of the site along Stevens Creek Boulevard; and

- Noise Measurement #4 represents the existing ambient noise from the State Route 85 or SR-85 west of the project site.

The ambient noise levels measured at these four locations is shown in Table 4.7-7. The primary noise sources during all four measurements was from the traffic on Stevens Creek Boulevard, SR-85, and parking lot noises.

TABLE 4.7-7 NOISE MEASUREMENTS

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Glenbrook Apartment Homes entrance on Mary Avenue	66.9	47.3	88.5	10:53 a.m.
2	Along Mary Avenue next to Senior Center	75.2	48.0	94.4	11:08 a.m.
3	Along Stevens Creek Boulevard, south of project site	77.9	53.7	90.2	11:26 a.m.
4	Parking lot adjacent to SR-85	75.4	60.0	81.2	11:41 a.m.

Source: Noise measurements taken by Kimley-Horn and Associates on May 1, 2018.

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. Sensitive receptors near the project site include the following, which are measured from the project site to the property line of the sensitive receptor location:

- Residences approximately 90 feet north of the site and 630 feet east of the site,
- Cupertino Senior Center approximately 80 feet east of the site, and
- De Anza College approximately 140 feet south of the site, across Stevens Creek Boulevard.

With respect to vibration, the nearest sensitive receptor is the building located 82 feet to the north measured from the estimated location of the construction equipment to the buildings.

Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and existing traffic volumes from the transportation analysis prepared by Kimley-Horn and Associates (see Chapter 4.8, Transportation, and Appendix H, Transportation Assessment, of this Draft EIR). The noise prediction model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (also referred to as energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the Caltrans. The average daily noise levels along roadway segments in proximity to the project site are included in Table 4.7-8.

TABLE 4.7-8 EXISTING TRAFFIC NOISE LEVELS

Roadway Segment	ADT	dBA CNEL at 100 feet from Centerline of Roadway
Stevens Creek Boulevard from SR-85 to Stelling Road	32,220	72.3
Mary Avenue from Parkwood Drive to Stevens Creek Boulevard	7,010	65.3

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.
Data source: Based on traffic data within the Transportation Analysis Memorandum, prepared by Kimley-Horn and Associates, 2019. Refer to Appendix B for traffic noise modeling assumptions and results.
Source: Kimley-Horn and Associates, PlaceWorks, 2019.

As shown in Table 4.7-8, the existing traffic-generated noise level on project-vicinity roadways is currently 72.3 dBA CNEL 100 feet from the centerline of Stevens Creek Boulevard and 65.3 dBA CNEL 100 feet from the centerline of Mary Avenue.

Noise Compatibility

Chapter 7, Health and Safety (HS) Element, of the General Plan presents a Land Use Noise Compatibility Matrix in Figure HS-8, Land Use Compatibility for Community Noise Environments, that identifies clearly acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. For the purpose of the proposed multi-family uses, the highest conditionally acceptable exterior noise level is 70 dBA CNEL. The highest normally acceptable exterior noise level is 65 dBA CNEL. Appendix D, Community Noise Fundamentals, of the General Plan, includes Figure D-2, Future Noise Contours, that illustrates the acceptable noise levels for the buildout of the General Plan. As shown on Figure D-2, the western portion of the project site located within the 70 dBA CNEL contour while the eastern portion is in the 65 dBA CNEL contour.

4.7.2 THRESHOLDS OF SIGNIFICANCE

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process, it was determined that development of the proposed project would not result in significant environmental impacts pursuant to the following thresholds of significance and, therefore, are not discussed in this chapter.

- For a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or pubic use airport, would the project expose people residing or working in the project area to excessive noise levels.

Based on the Initial Study and comments received during the scoping process, it was determined that the proposed project could result in a potentially significant noise impact if it would result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.
2. Generation of excessive groundborne noise levels.

4.7.3 IMPACT DISCUSSION

NOISE-1 **The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.**

Construction

Construction noise estimates are based upon noise levels from the FHWA Roadway Construction Noise Model as well as the distance to nearby sensitive receptors.[2] Reference noise levels from the FHWA are used to estimate noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Construction noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

There are two types of short-term noise impacts associated with construction, noise generated from equipment and increase in traffic flow on local streets. Construction for the proposed project is expected to last approximately 16 months.

Construction Equipment Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery.

Grading and excavation phases of project construction tend to be the shortest in duration and create the highest construction noise levels due to the operation of heavy equipment required to complete these activities. It should be noted that only a limited amount of equipment can operate near a given location at a particular time. Equipment typically used during this stage includes heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, and scrapers. Operating cycles for these types of construction

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[2] Federal Highway Administration (FHWA), 2006, *Roadway Construction Noise Model (RCNM) User's Guide*, FHWA-HEP-05-054.

equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute. According to the applicant, no pile-driving will be used during construction for the proposed project.

Pursuant to CMC Section 10.48.053, the City allows heavy construction activities that exceed the noise standards to occur during daytime hours, provided that the equipment has high- quality noise muffler and abatement devices installed and is in good condition. The activity must not produce a noise level more than 87 dBA at a distance of 25 feet or exceed 80 dBA for nearby properties. Only one of these two criteria must be met. Construction within 750 feet of a residential area is not allowed over the weekends, holidays, and during the nighttime.

Sensitive receptors near the project site include residences approximately 90 feet north of the site, the Cupertino Senior Center approximately 80 feet east of the site, and the De Anza College approximately 140 feet south of the site, across Stevens Creek Boulevard. These distances are from the proposed project site to the sensitive receptor property line. These sensitive uses may be exposed to elevated noise levels during project construction.

Table 4.7-9 summarizes the estimated exterior construction noise level for sensitive receptors. Note that the distances in Table 4.7-9 are from the property line of the nearest receptor to the main construction zone of the proposed project.

TABLE 4.7-9 PROJECT CONSTRUCTION AVERAGE NOISE LEVELS

Construction Phase/Activity	Receptor Location			Estimated Exterior Construction Noise Level	
	Land Use	Direction	Distance[a]	(dBA L_{eq})[b]	dBA L_{max}
Demolition	Residential	North	175	73.9	78.7
	Institutional	East	160	74.6	79.5
		South	280	69.8	74.6
Site Preparation	Residential	North	175	74.2	74.1
	Institutional	East	160	75.0	74.9
		South	280	70.1	70.0
Grading	Residential	North	175	75.2	74.1
	Institutional	East	160	75.9	74.9
		South	280	73.0	74.4
Paving	Residential	North	175	74.2	74.1
	Institutional	East	160	74.2	74.1
		South	280	70.6	70.0
Building	Residential	North	175	74.9	74.1
	Institutional	East	160	75.7	74.9
		South	280	71.0	70.0

Notes:

a. Distance is from the property line of the nearest receptor to the main construction zone of the proposed project.

b. Derived from the FHWA *Roadway Construction Noise Model (FHWA-HEP-05-054),* Jan 2006. Refer to Appendix G for noise modeling assumptions and results.

Source: Kimley-Horn and Associates, PlaceWorks, 2019.

As shown in Table 4.7-9, the highest exterior noise levels at the nearest off-site receptor (Cupertino Senior Center) would be 75.9 dBA L_{eq} during the grading phase and 79.5 dBA L_{max} during the demolition phase.

Although construction activities are not projected to exceed the City's standard of 80 dBA at the nearest receptor, because the predicted noise level of 79.5 dBA during demolition are within 0.5 dBA of the threshold implementation of Mitigation Measure NOISE-1 is required. Implementation of Mitigation Measures NOISE-1 is required to ensure that construction noise levels do not exceed the City's standards and that construction activities adhere to the City's time-of-day restrictions. With implementation of Mitigation Measure NOISE-1, impacts from construction equipment would be less than significant.

Impact NOISE-1: The proposed project could generate a substantial temporary increase in ambient noise levels in the vicinity of the proposed project during the construction phase that could exceed the standards established in the local noise ordinance.

Mitigation Measure NOISE-1: Prior to Grading Permit issuance or the start of demolition activities, the project applicant shall demonstrate, to the satisfaction of the City of Cupertino Public Works Director and/or Community Development Director, that the proposed project complies with the following:

- Pursuant to Cupertino Municipal Code (CMC) Section 10.48.053 the construction activities shall be limited to daytime hours as defined in CMC Section 10.48.010 (i.e., daytime hours are from 7:00 a.m. to 8:00 p.m. on weekdays).
- At least 90 days prior to the start of construction activities, all offsite businesses and residents within 300 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the proposed project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification should include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, which includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City.
- During the entire active construction period, equipment and trucks used for project construction will utilize the best available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
- During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible.
- Haul routes shall be selected to avoid the greatest amount of sensitive use areas.
- Signs will be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment will be turned off if not in use for more than 5 minutes.

- During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only. The construction manager will use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.

Construction Traffic Noise

Construction noise may be generated by large trucks moving materials to and from the project site. Large trucks would be necessary to deliver building materials as well as remove dump materials and cut soil. Excavation and cut and fill would be required, resulting in grading of approximately 69,000 net cubic yards to be exported from the site. The proposed project would generate the highest number of daily trips during the building construction phase.[3] It is estimated that the proposed project would generate up to 239 worker trips and 52 vendor trips per day. Because of the logarithmic nature of noise levels, a doubling of the traffic volume would result in a noise level increase of 3 dBA. As shown above in Table 4.7-8 (Section 4.7.1.3, Existing Conditions), the section of Stevens Creek Boulevard between SR-85 and Stelling Road has an average daily trip volume of 32,220 vehicles. Therefore, 291 project construction trips (239 worker trips plus 52 vendor trips) would not double the existing traffic volume of 32,220 vehicles per day. Accordingly, the construction related traffic noise would be *less than significant*.

Operation

Operational noise issues evaluated in this section include vehicle traffic noise as well as stationary source noise (e.g., mechanical equipment, on-site trucks/loading docks, etc.). Traffic noise modeling was completed using the FHWA RD-77-108 model. Traffic noise level significance is determined by comparing the increase in noise levels (traffic contribution only) to increments recognized by Caltrans as representing a perceptible increase in noise levels (i.e., 3 dBA). Operational stationary noise is evaluated based on the standards within the CMC Chapter 10.48, Community Noise Control.

Roadway Traffic Noise

Operation of the proposed project would contribute to traffic volumes along study roadway segments, shown in Table 4.7-10. According to the transportation analysis prepared by Kimley-Horn and Associates (see Chapter 4.8, Transportation, and Appendix H, Transportation Assessment, of this Draft EIR), the proposed project would generate2,174 average daily weekday trips before trip reductions are applied, 1,934 average daily weekday trips after trip reductions are applied, and 275 fewer (or negative 275) average daily weekday trips once credit is taken for the trips currently generated from the existing Oaks Shopping Center that has an existing occupancy rate of 85 percent. Therefore, the noise from traffic from the proposed project would be less than noise from traffic from existing conditions. However, to present a conservative analysis, this evaluation is based on the trips generated from the proposed project after trip reductions but does not account for trip credits from the existing shopping center. . Traffic noise levels for roadways primarily affected by the proposed project were calculated using the FHWA's Highway Noise

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[3] Kimley-Horn and Associates, Inc., 2019, *Air Quality Assessment for proposed Westport Project in the City of Cupertino, California*. PlaceWorks.

Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the proposed project.[4]

TABLE 4.7-10 EXISTING AND FUTURE WITH PROJECT TRAFFIC NOISE LEVELS

Roadway Segment	Existing Noise Level[a] (dBA CNEL)	Future With Project Noise Level[a] (dBA CNEL)	Change (dBA CNEL)	Significant Impacts?
Stevens Creek Boulevard from SR-85 to Stelling Road	72.3	73.0	0.7	No
Mary Avenue from Parkwood Drive to Stevens Creek Boulevard	65.3	66.4	1.1	No

Notes: dBA = A-weighted decibels; CNEL = community noise equivalent level.
a. Noise levels are calculated 100 feet from centerline of the roadway.
Source: Kimley-Horn and Associates, PlaceWorks, 2019.

In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable.[5] Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant. As a general rule, for a traffic noise level to increase by 3 dBA the traffic volumes on project area roadways would essentially need to double.

As shown in Table 4.7-10, if the trips generated from the proposed project were new trips, they would not have a significant impact on traffic noise levels. The addition of trips to the existing noise levels on Stevens Creek Boulevard near the project site would have a less than 1 dBA increase. The addition of trips to the existing noise levels on Mary Avenue near the project site would have a slightly greater than 1 dBA increase; however, the increase on either roadway would be less than 3 dBA and, therefore, not perceptible. Therefore, permanent noise increases due to proposed project-related traffic would be *less than significant*.

Stationary Noise

Implementation of the proposed project would create different sources of noise in the project vicinity. The noise sources associated with the proposed project that would potentially impact off-site receptors include the following:

- **Residential Areas.** In general, residential land uses are not considered major sources of noise. Noise that is typical of high-density residential land uses includes group conversations, pet noise, vehicle noise (see discussion below), and general maintenance activities. Noise from residential stationary sources would primarily occur during the "daytime" activity hours of 7:00 a.m. to 10:00 p.m. Furthermore, the residences would be required to comply with the noise standards set forth in the Cupertino General Plan and CMC. Noise impacts would be *less than significant* in this regard.

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[4] Kimley-Horn and Associates, 2018, *Westport Cupertino – Transportation Analysis.* PlaceWorks.
[5] California Department of Transportation (Caltrans), 2013, *Technical Noise Supplement*.

- **Mechanical Equipment.** The proposed project would generate stationary-source noise associated with heating, ventilation, and air conditioning (HVAC) units. Such HVAC units typically generate noise levels of approximately 55 dBA at a reference distance of 100 feet from the operating units during maximum heating or air conditioning operations. As stated above, the nearest off-site sensitive receptor property lines are located more than 80 feet from the existing commercial and mixed-use areas on the project site. The HVAC equipment associated with the proposed project would be similar to the existing commercial and retail uses. The proposed HVAC equipment would be buffered by a proposed on-site internal road (see Figure 3-4 in Chapter 3, Project Description, of this Draft EIR) and would be approximately 100 feet away from the nearest off-site residences. Given that off-site sensitive receptors would be located beyond 100 feet from on-site HVAC units, noise impacts generated by new HVAC units would be *less than significant*.
- **Loading Area Noise.** The proposed project would require on-site truck delivery operations for neighborhood-serving goods and services, trash/recycling pickup, as well as residential moving services that could generate noise from maneuvering and idling trucks and loading/unloading items. The majority of vehicles would consist of vendor deliveries in small cargo vans and small trucks. It is anticipated some residents would occasionally require larger moving trucks. The noise associated with occasional large truck delivery as well as smaller cargo vans would not result in a significant number of truck trips to significantly increase noise within the project area. Given the site is currently occupied with a 71,254 square-foot shopping center that generates noise from varying sizes of vans and trucks for deliveries/pickups, the proposed 20,000 square feet of retail is anticipated to create significantly less noise from such retail/commercial loading activities. Furthermore, loading area activities are anticipated to occur during daytime hours when there is the expectation for such noises in urban areas. Therefore, loading area noise associated with the proposed project site would not be an intrusive or significant noise source compared to existing conditions and associated impacts would be *less than significant*.
- **Parking Areas**. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. Also, noise would primarily remain on the project site and would be intermittent (during peak-events). Parking lot noise can also be considered a “stationary” noise source. Noise levels from parking lot activities typically range from approximately 60 to 63 dBA at a distance of 50 feet. While the instantaneous maximum sound levels generated by a car door closing, engine starting up, and vehicle movements on-site may be periodically audible to adjacent noise-sensitive receptors, parking area noises are typical noise sources in urban areas.

  The proposed project includes a one-story subterranean parking structure located in the eastern portion of the site. Parking noise at this location is anticipated to be lower than existing conditions, because the majority of parking would occur in a structure that would be predominantly enclosed. Surface parking would be distributed throughout the project site. Noise associated with the surface parking areas would be consistent with the existing parking lot noise that currently occurs on the site. In addition, surface parking lot noise would be partially masked by background noise from traffic along SR-85 and Stevens Creek Boulevard. Therefore, parking lot noise would not result in substantially greater noise levels than currently exist in the vicinity. Noise impacts would be *less than significant*.

- **Landscape Maintenance Activities**. Development and operation of the proposed project would include landscaping activities (e.g., lawnmowers, leaf blowers, weed eaters) requiring periodic maintenance. Noise generated by a gasoline-powered lawnmower is estimated to be approximately 70 dBA at a distance of 5 feet. However, maintenance activities would operate during daytime hours for brief periods of time, as allowed by the CMC, and would not permanently increase ambient noise levels in the project vicinity. Furthermore, landscaping activities currently occur on the project site and this would not change. Therefore, with adherence to the CMC, impacts associated with landscape maintenance would be *less than significant*.

Significance With Mitigation: Less than significant.

Noise Compatibility

Chapter 7, Health and Safety (HS) Element, of the General Plan presents a Land Use Noise Compatibility Matrix in Figure HS-8, Land Use Compatibility for Community Noise Environments, that identifies normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. In no case would it be desirable for any land use to exceed the highest conditionally acceptable noise level shown in Figure HS-8. Thus, for the purpose of the proposed multi-family uses, the highest conditionally acceptable exterior noise level is 70 dBA CNEL. The highest normally acceptable exterior noise level is 65 dBA CNEL. As discussed above, due to the Supreme Court decision regarding the assessment of the environment's impacts on proposed projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while the noise from existing sources is taken into account as part of the baseline, the direct effects of exterior noise from nearby noise sources as they pertain to land use compatibility of the proposed project is no longer a required topic for impact evaluation under CEQA. Nonetheless, for the complete understanding of the public, this noise analysis discusses noise compatibility as it applies to the development of the proposed project. However, no determination of significance is required.

According to the existing noise environment described in Section 4.7.1.3, Existing Conditions, the project site under existing conditions experiences noise levels up to 72.3 dBA CNEL from existing traffic on the section of Stevens Creek Boulevard between SR-85 and Stelling Road. Therefore, the ambient noise level around the project site exceeds the normally acceptable terms of 65 dBA CNEL and conditionally acceptable terms for multi-family use of 70 dBA CNEL. Therefore, the future residents of the proposed on-site multi-family residential units could be exposed to elevated noise levels from traffic noise along SR-85 and Stevens Creek Boulevard. Furthermore, the interior standard pursuant to the California Building Code is 45 dBA CNEL. As described in the General Plan, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise reduction features included in the design. Conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice.[6] A detailed acoustical study demonstrating that all

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[6] Cupertino General Plan, Chapter 7, Health and Safety, Figure HS-8, Land Use Compatibility for Community Noise Environments, Conditionally Acceptable, page HS-23.

residential units would meet the City and State standards would be required prior to the issuance of a building permit. Specifically, the detailed acoustical study would need to demonstrate that all residential units would meet the City's 65 dBA exterior noise standard for all patios, balconies, and common outdoor living areas through any necessary noise reduction features (barriers, berms, enclosures, etc.). Further, all residential units would be required to be designed to ensure that interior noise levels in habitable rooms from exterior sources (including vehicles on adjacent roadways) shall not exceed 45 dBA, in compliance with Title 24 of the California Code of Regulations.

As previously stated in Section 4.7.1.2, Regulatory Framework, this scenario is framed as an impact of the existing environment on the project and is therefore not in the purview of this environmental analysis. Therefore, no impact conclusion is required in this EIR.[7]

NOISE-2 The proposed project would not generate excessive groundborne noise levels.

Construction Vibration

Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures. Groundborne vibrations from construction may also cause human annoyance when the vibration rises significantly above the threshold of human perception for extended periods of time.

As described in Section 4.7.1.2, Regulatory Setting, the FTA has published standard vibration velocities for construction equipment operations (see Table 4.7-3). These measurements are also the level at which vibrations may begin to annoy people inside buildings.[8] As shown in Table 4.7-3, depending on the building category (i.e., reinforced concrete, steel, masonry, etc.) the potential construction vibration damage can vary. For example, in a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 in/sec PPV is considered safe and would not result in any construction vibration damage. The FTA architectural damage criterion for continuous vibrations for non-engineered timber and masonry buildings is 0.20 in/sec PPV.

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[7] *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015.

[8] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as bulldozers and trucks. Pile drivers are not included in the mix of construction equipment required to construct the proposed project.

This evaluation uses the FTA recommended standard of 0.20 in/sec PPV with respect to the prevention of structural damage for normal buildings[9]and human annoyance.[10] Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet.

Table 4.7-10 identifies vibration levels for typical construction equipment at a distance of 25 feet and 82 feet, which is the estimated distance from construction equipment to the closest building. As shown in Table 4.7-11, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction would range from 0.003 to 0.210 inches/second PPV at 25 feet from the source of activity. No buildings are located within 25 feet of the project site.

TABLE 4.7-11 TYPICAL CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Equipment	Approximate PPV at 25 feet (inches per second)	Approximate PPV at 82 feet (inches per second)
Large Bulldozer	0.089	0.015
Caisson Drilling	0.089	0.015
Loaded Trucks	0.076	0.013
Rock Breaker	0.059	0.010
Jackhammer	0.035	0.006
Vibratory Roller	0.210	0.035
Small Bulldozer	0.003	0.001

Note: PPV, peak particle velocity
Source: Kimley-Horn and Associates, PlaceWorks, 2019.

The nearest off-site sensitive receptors would be the building located 82 feet to the north. Based on typical vibration levels, ground vibration generated by heavy-duty equipment could reach levels of 0.035 in/sec PPV at 82 feet. The use of construction equipment would not result in a groundborne vibration velocity level above the established threshold of 0.20 inch/second PPV. Furthermore, it is important to note that construction activities would occur throughout the project site and would not be concentrated at a single point near this off-site structure. As a result, impacts associated with excessive groundborne vibration during construction would be *less than significant*.

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[9] Federal Transit Administration (FTA), 2018, *Transit Noise and Vibration Impact Assessment*.

[10] California Department of Transportation, 2013, *Technical Noise Supplement.*

Operational Vibration

Operation of the proposed project would not generate substantial levels of vibration because there are no notable sources of vibrational energy associated with the proposed project, such as heavy industrial machinery, railroad or subway operations. Thus, operation of the proposed project would result in *less-than-significant* groundborne vibration impacts.

Significance Without Mitigation: Less than significant.

4.7.4 CUMULATIVE IMPACTS

NOISE-3 **The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to noise.**

A significant cumulative noise impact may occur if the proposed project's contribution to the cumulative ambient noise environment is significant (3 dBA or higher). As described in Chapter 4, Environmental Evaluation, of this Draft EIR, the nearest cumulative project is the Loc-N-Stor project located at 10655 Mary Avenue about 0.5 miles to the north. This project is currently under preliminary review and no construction timeline has been established. The proposed project's construction activities were estimated to be below the City's standard of 80 dBA, but implementation of Mitigation Measure NOISE-1 is required to ensure the construction noise levels would not exceed 80 dBA for the surrounding off-site sensitive receptors. Furthermore, these periodic, temporary, noise impacts would cease upon completion of construction activities. If the Loc-N-Stor project were to be constructed at a similar time as the proposed project, it would be considered too far away to cause a cumulative construction noise impact. Based on the fact that noise dissipates as it travels away from its source, noise impacts from on-site activities and other stationary sources (e.g., mechanical equipment, parking areas) would be limited to the project site and vicinity. Thus, cumulative operational noise impacts from related projects, in conjunction with project-specific noise impacts, would not be cumulatively significant. As described in impact discussion NOISE-1 and NOISE-2, construction and operation of the proposed project would not result in any significant noise impacts. Therefore, the project's incremental effect to the future cumulative noise environment is not cumulatively considerable.

Significance With Mitigation: Less than significant.

4.8 TRANSPORTATION

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) and comments received in the scoping process, it was determined that construction and operation of the proposed project would not result in significant environmental impacts related to increased hazards create by design features or inadequate emergency access. Therefore, this chapter includes an evaluation of the potential consequences related to obstruction of a transportation plan or inconsistencies with CEQA Guidelines Section 15064.3, subdivision (b). This chapter also describes the environmental setting, including regulatory framework and existing mobility conditions in the project area.

The analysis in this chapter is based in part on the *Westport Cupertino – Transportation Analysis*, dated November 27, 2018, and the *Westport Cupertino – Stevens Creek Boulevard & SR 85 On Ramp Signalization Analysis,* dated September 18, 2019, prepared by Kimley-Horn and Associates. Complete copies of these reports are provided in Appendix H, Transportation Assessment, of this Draft EIR. A third-party peer review of these reports was completed by Hexagon Transportation Consultants. City staff also reviewed these reports.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 REGULATORY FRAMEWORK

This section describes federal, State, regional, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process for transportation.

State Regulations

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The legislature found that with adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32).

SB 743 started a process that could fundamentally change transportation impact analyses as part of CEQA compliance. These changes will include the elimination of auto delay, level of service (LOS), and similar measures of vehicular capacity or traffic congestion as the basis for determining the significant impacts of land use projects under CEQA. As part of the new CEQA Guidelines, the new criteria “shall promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses.” The Office of Planning and Research (OPR) developed alternative metrics and thresholds based on VMT. Amendments to the CEQA Guidelines were certified by the Secretary of the Natural Resources Agency in December 2018, and automobile delay, as described solely by level of service (commonly referred to a LOS) or of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment. There is an opt-in period until July 1, 2020, for agencies to adopt new VMT-based criteria. In the interim, automobile delay is still considered a significant impact, and the City of Cupertino will continue to use the established level-of-service criteria (e.g., LOS A through LOS F), as described below, as well as VMT.

Regional Regulations

Santa Clara County Congestion Management Plan

The Santa Clara Valley Transportation Authority (VTA) establishes transportation plans that are incorporated into the larger Regional Transportation Plan (RTP). In Santa Clara County, the VTA is also the Congestion Management Agency (CMA) tasked with preparing a comprehensive transportation improvement program among local jurisdictions (i.e., the CMP) that describes the strategies to reduce traffic congestion and improve land use decision-making. VTA's latest CMP is the 2017 *Congestion Management Program*.[1] The CMP contains level-of-service standards for highways and arterials. The minimum level-of-service standard for Santa Clara County is LOS E, except for grandfathered facilities that had already reached LOS F. Because the level-of-service standards for Santa Clara County were established in October of 1991, any intersection operating at LOS F prior to the established 1991 level-of-service standards is not held to the minimum standard of LOS E.[2] Member Agencies, which are the cities and County of Santa Clara, must ensure that CMP roadways operate at or better than the minimum level-of-service standard or they face losing gas tax subventions. The VTA monitors the performance of the CMP facilities at a minimum of every two years. If the minimum level-of-service standards are not met, Member Agencies must develop multimodal improvement plans to address the congestion.[3]

The VTA presents transportation impact analysis (TIA) guidelines, most recently adopted in October 2014, for assessing the transportation and circulation impacts of development projects and identifying whether improvements are needed to adjacent roadways, bike facilities, sidewalks, and transit services affected by the proposed project. The TIA guidelines have been adopted by local agencies within Santa Clara County, and are applied to analyze the regional transportation system. Per the TIA guidelines, a TIA must be completed for CMP purposes for projects that meet or exceed the trip threshold of generating 100 or more net new weekday peak hour morning or AM (7:00 to 10:00 a.m.) and peak hour evening or PM (4:00 to 7:00 p.m.) commute times or weekend peak hour trips, including both inbound and outbound trips.

Plan Bay Area

Plan Bay Area 2040 is the Bay Area's current Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS) that was adopted jointly by the Association of Bay Area Government's (ABAG) and Metropolitan Transportation Commission (MTC) on July 26, 2017. As part of the implementing framework for *Plan Bay Area*, local governments, including Cupertino, have identified Priority Development Areas (PDAs) to focus growth.[4] PDAs are transit-oriented, infill development opportunity areas within existing

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[1] Note that the 2018 CMP report is the latest version, but it is dated May 24, 2018. Thus, the 2017 CMP report was the latest version available when the study was prepared.

[2] Santa Clara County VTA, 2017, Congestion Management Plan, page 21.

[3] Santa Clara County VTA, 2017, Congestion Management Plan, page 25.

[4] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-7.

communities. In addition to PDAs, *Plan Bay Area* identifies Transit Priority Areas (TPAs), which are areas within one-half mile of a major transit stop (15 minute or less service level frequency) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations. An overarching goal of the regional *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. The project site is located in a Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas PDA. Because the proposed project is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes, it is also a designated TPA.[5] A TPA is defined as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.

Local Regulations

Cupertino General Plan

The Cupertino General Plan (Community Vision 2015-2040) includes policies that are relevant to transportation, which are applicable to the proposed project. The policies are identified in Chapter 5, Mobility, of the General Plan and listed in Table 4.8-1.

TABLE 4.8-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION

Policy Number	Policy
Chapter 5, Mobility Element (M)	
Policy M-1.2	**Transportation Impact Analysis.** Participate in the development of new multi-modal analysis methods and impact thresholds as required by Senate Bill 743. However, until such impact thresholds are developed, continue to optimize mobility for all modes of transportation while striving to maintain the following intersection Levels of Service (LOS) at a.m. and p.m. peak traffic hours: ▪ Major intersections: LOS D ▪ Stevens Creek Boulevard and De Anza Boulevard: LOS E+ ▪ Stevens Creek Boulevard and Stelling Road: LOS E+ ▪ De Anza Boulevard and Bollinger Road: LOS E+
Policy M-2.3	**Connectivity.** Promote pedestrian and bicycle improvements that improve connectivity between planning areas, neighborhoods and services, and foster a sense of community.
Policy M-2.4	**Community Impacts.** Reduce traffic impacts and support alternative modes of transportation rather than constructing barriers to mobility. Do not close streets unless there is a demonstrated safety or over-whelming through traffic problem and there are no acceptable alternatives since street closures move the problem from one street to another.
Policy M-2.5	**Public Accessibility.** Ensure all new public and private streets are publicly accessible to improve walkability and reduce impacts on existing streets.

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[5] *Plan Bay Area*, Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining, https://www.planbayarea.org/pda-tpa-map, accessed on July 11, 2019.

TABLE 4.8-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION

Policy Number	Policy
Policy M-3.2	**Development.** Require new development and redevelopment to increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, shopping and employment destinations throughout the city.
Policy M-3.6	**Safe Spaces for Pedestrians.** Require parking lots to include clearly defined paths for pedestrians to provide a safe path to building entrances.
Policy M-3.8	**Bicycle Parking.** Require new development and redevelopment to provide public and private bicycle parking.
Policy M-7.1	**Multi-Modal Transportation Impact Analysis.** Follow guidelines set by VTA related to transportation impact analyses, while conforming to State goals for multi-modal performance targets.
Policy M-9.2	**Reduced Travel Demand.** Promote effective TDM programs for existing and new development.

Source: Cupertino General Plan (Community Vision 2015-2040).

Cupertino Municipal Code

The Cupertino Municipal Code (CMC) includes various directives to minimize adverse impacts to the transportation network. The provisions related to potential impacts from the proposed project are included in Title 11, Vehicles and Traffic, and Title 14, Streets, Sidewalks, and Landscaping, as follows:

- **Title 11, Vehicles and Traffic.** This title establishes regulations with respect to parking, bicycles, pedestrians, and circulation. Additionally, Title 11 establishes regulations governing roadway design features, such as speed bumps.
- **Chapter 14.02, Transportation Impact Fee Program.** This chapter assumes that new development will create additional demand on the City's existing transportation infrastructure, and requires all new development within the city to pay a Transportation Impact Fee, as a mitigation measure, to use as a funding sources for costs of the transportation improvements required to serve new development.

Cupertino Bicycle Transportation Plan

In 2016, the City of Cupertino adopted its *Bicycle Transportation Master Plan* (Bike Plan), which is a citywide plan to encourage bicycling as a safe, practical and healthy alternative to the use of the family car. The Bike Plan illustrates Cupertino's current bicycle network, identifies gaps in the network, and proposes improvement projects to address the identified gaps.[6] The 2016 Bike Plan includes standards for engineering, encouragement, education, and enforcement intended to improve the bicycle infrastructure in the city to enable people to bike to work and school, to utilize a bicycle to run errands, and to enjoy the health and environmental benefits that bicycling provides cyclists of every age.

Cupertino Pedestrian Transportation Plan

The *2018 Cupertino Pedestrian Transportation Plan* (Pedestrian Plan) contains goals, policies, and specific recommendations to increase the walkability of Cupertino, including the Pedestrian Guidelines. The Pedestrian Plan is a companion document to the Bike Plan. It includes specific recommendations to

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[6] City of Cupertino, 2016 Bicycle Transportation Plan, Figure 3-7: Bikeway projects.

improve pedestrian conditions, which fall into four main categories: infrastructure and operations, evaluation and planning, education and enforcement, and project implementation.[7]

4.8.2 METHODOLOGY

This section presents the methods used to determine the impacts of the proposed project on the existing transportation network. This section describes the analysis methodologies, the applicable level of service standards, and VMT methodology.

The VTA TIA guidelines, dated October 2014, and the City of Cupertino guidelines and criteria were utilized in this analysis to determine project requirements and potential impacts. See Section 4.8-5, Thresholds of Significance, for details on the significance criteria. As discussed in more detail below in Section 4.8-5, Impact Discussion, under TRANS-1, the proposed project would generate approximately 47 net AM and negative 22 net PM peak hour trips and does not meet or exceed the VTA's threshold to prepare a TIA (see Table 4.8-5 below). Therefore, as stated at the beginning of this chapter, the two transportation memos were prepared by Kimley-Horn and Associates and reviewed by Hexagon Transportation Consultants and City staff, are the basis for this chapter. The two memos are provided in Appendix H of this Draft EIR.

4.8.2.1 STUDY INTERSECTIONS

Intersection #1: Stevens Creek Boulevard/Mary Avenue

The Stevens Creek Boulevard/Mary Avenue intersection #1 is a signalized intersection under the jurisdiction of the City of Cupertino. No improvements are proposed for this intersection. The trip generation, distribution, and assignment for the proposed project, and the level-of-service analysis for this intersection are discussed below in Section 4.8.5. Impact Discussion.

Existing peak hour traffic volumes at this study intersection were collected on Wednesday April 25, 2018.

Intersection #2: Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal

The Stevens Creek Boulevard and State Route 85 (SR-85) North Bound Ramp Terminal intersection #2 is a partially signalized intersection under the jurisdiction of the City of Cupertino and Caltrans. This intersection is being evaluated in this EIR because the proposed project would include the installation of a Class IV separated bikeway on the portion of Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp. Pursuant to the conceptual Class IV separate bikeway design in the City's 2016 Bike Plan, the proposed project would reconfigure the existing westbound right-turn movement from Stevens Creek Boulevard onto the northbound SR-85 on ramp by installing a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement to accommodate the

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[7] City of Cupertino, 2018 Pedestrian Transportation Plan, Table 5: Summary of Recommendations for Pedestrian-related Policies, Programs, and Practices.

proposed Class IV bikeway. The level-of-service and queuing analysis for this intersection are discussed below in Section 4.8.5, Impact Discussion.

Existing peak volumes at this study intersection were collected on May 22 and 23, 2019.

4.8.2.2 STUDY SCENARIOS

The following scenarios were analyzed for the two study intersections in the AM and PM peak hours:

- Existing without Project
- Existing plus Project
- Cumulative without Project
- Cumulative plus Project

The following scenarios were analyzed for the intersection #2 (Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal) in the AM and PM peak hours:

- Existing plus Project and Signalized Conditions for the Westbound Right-turn Movement
- Cumulative plus Project and Signalized Conditions for the Westbound Right-turn Movement

4.8.2.3 LEVEL OF SERVICE

Traffic conditions at the two study intersections were evaluated using level of service. The level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. Intersection delay and level-of-service calculations were performed using Highway Capacity Manual (HCM) 2000 methodology in Synchro Version 9, which is consistent with TRAFFIX software. Synchro was used instead of TRAFFIX because it provides improved signal timing evaluation at the study intersection of Mary Avenue and Stevens Creek Boulevard. The correlation between average control delay and level of service at signalized intersections is shown in Table 4.8-2 below.

The level-of-service standards for each study intersection are as follows:

- **Stevens Creek Boulevard/Mary Avenue (#1).** The City of Cupertino level of service standard for signalized intersections is LOS D. Because the Stevens Creek Boulevard/Mary Avenue intersection is signalized, the level-of-service standard is LOS D or better.
- **Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal (#2).** The VTA CMP states a LOS E, except for facilities grandfathered in at LOS F, is acceptable for both the AM and PM peak hour at a study intersection. Because the Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal (#2) intersection is not identified as an intersection operating at LOS F, a minimum of the level-of-service standard of LOS E is acceptable for the study intersection, which is consistent with Caltrans' standards.

TABLE 4.8-2 SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS BASED ON CONTROL DELAY

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Signal progression is extremely favorable. Most Vehicles are during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B+ B B-	Operations characterized by good progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0
C+ C C-	Higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0
D+ D D-	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0
E+ E E-	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures occur frequently.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	This level of delay is considered unacceptable to most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contribution causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, 2000 Highway Capacity Manual (Washington, D.C., 2000) page 10 to 16. Santa Clara Valley Transportation Authority Traffic Level of Service Analysis Guidelines (June 2003), Table 2.

4.8.2.4 QUEUING

An intersection operations analysis was provided to identify potential impacts with respect to vehicular queuing at the Stevens Creek Boulevard/SR-85 North Bound Ramp Terminal intersection #2. The queuing analysis was prepared to determine the extent of vehicle queuing that would occur along westbound Stevens Creek Boulevard as a result of the project’s proposed signal control for the westbound right-turn movement at the Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal intersection #2 and to ensure that the intersection would accommodate the anticipated queue lengths so cars would not “spill” to the through lanes. If there is insufficient storage length, queues of vehicles may extend out of the lane making the intersection less efficient as the queue would block through vehicles from proceeding through the intersection.

Detailed intersection queuing calculations are provided in the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR. The 95th percentile queue lengths for intersection #2 were compared for the Existing plus Project conditions and Cumulative plus Project conditions. The 95th percentile queue length value indicates that a queue of this length or less would occur on 95 percent of the signal cycles that include a pedestrian or bicycle call.

A Simtraffic microsimulation model was prepared for the analysis. The model included the two adjacent intersections, 1) Stevens Creek Boulevard/Mary Avenue intersection #1 to the east and 2) Stevens Creek Boulevard/SR-85 southbound ramp terminal intersection to the west, which is not a study intersection.

These two intersections were included in the model in order to have accurate arrival patterns for the analysis of Stevens Creek Boulevard and SR-85 Northbound Ramp Terminal intersection #2, particularly the westbound right-turn movement.

SimTraffic software cannot accurately simulate this signal timing plan because of the random nature of pedestrian and bicycle arrivals/crossings. Thus, an equivalent simulation was developed that is more conservative and assumes a pedestrian or bicycle call with every green east-west phase. In addition, a pedestrian crossing time was used in the simulation, which is higher compared to a bicycle crossing time.

Queues would be generated by the vehicles stopping and waiting for a pedestrian or bicycle to cross when the right-turn arrow is red. Queue results of five SimTraffic simulations and HCM 2000 level-of-service results for the westbound right-turn lane were conducted for this analysis.

4.8.2.5 VEHICLE MILES TRAVELED

VMT is a useful metric in understanding the overall effects of a project on the transportation system. VMT is the sum of all the vehicle trips generated by a project multiplied by the lengths of their trips to and from the site on an average weekday. A vehicle driven 1 mile is 1 VMT. Therefore, a project with a higher VMT would have a greater environmental effect than a project with a low VMT.

The trip lengths vary by the land use type and the trip purpose. For example, a trip from a residence to a job may be longer than the trip from a residence to a neighborhood school. The VMT values stated below represent the full length of a given trip, and are not truncated at city, county, or region boundaries.

Many factors affect travel behavior and trip lengths such as density of land use, diversity of land uses, design of the transportation network, distance to high-quality transit, and demographics. Low-density development separated from other land uses and located in areas with poor access to transit generates more automobile travel and higher VMT compared to development located in urban areas with more access to transit.

Vehicle miles traveled (VMT) were calculated using California Emissions Estimator Model (CalEEMod).

4.8.2.6 TRIP REDUCTIONS AND CREDITS

The following describes the trip reductions and credits that apply to the proposed residential mixed-use project. The total trip reductions are shown below in Table 4.8-5 under impact discussion TRANS-1.

Internal Trip Capture Reductions

Internal trip capture is the portion of trips generated by a mixed-use development that both begin and end within the development. The importance of internal trip capture is that those trips satisfy a portion of the total development's trip generation and they do so without using the external road system. Internal trip capture was calculated using the *National Cooperative Highway Research Program Report 684*, dated 2011. This methodology estimates the number of trips that have both the origin and destination within the proposed development. These internal trips were then subtracted from the total gross trips. After applying internal capture to the proposed project, reductions of 9 percent daily trips, 2 percent AM (3 percent in / 1 percent out), and 15 percent PM (13 percent in/ 17 percent out) were applied to gross trips.

Transit Priority Area Reductions

The proposed project would place housing on a site that is within 0.50 miles of a "major transit stop" as defined by CEQA Guidelines Section 15191[8] and the VTA.[9] The De Anza Transit Center located approximately 500 feet (0.10 miles) from the southeast corner of the project site and approximately 1,700 feet (0.31 miles) from the northwest corner of the project site, with six regular bus lines (23, 25, 53, 54, 55, and 81) and one rapid bus line (323), qualifies as a major transit stop. Route 23 and 25 have 10-minute frequency of service intervals at peak and mid-day times on weekdays (see Table 4.8-4 below).[10] According to VTA TIA Guidelines, a 2 percent trip reduction can be used for housing within 2,000 feet (0.38 miles) of a major bus stop.

Pass-by Trips Reductions

A pass-by trip is a trip that already exists on the transportation network that stops by the project site on the way to its original destination. For example, a driver that was going somewhere else decides to stop at the site on their way to their original destination. Because another use generated that trip and the project site did not directly generate the trip, pass-by trips are removed from the gross trip generation. A pass-by trip reduction of 26 trips for the proposed retail component of the proposed project was applied only to the PM peak hour based on average rates from Appendix E of the *Institute of Transportation Engineers (ITE) Trip Generation Handbook*, 3rd Edition.

Existing Oaks Shopping Center Credit

Because the proposed project is the redevelopment of a site that is currently operating, the trips that are currently being generated would be replaced with the new trips of the proposed project. The Oaks Shopping Center was 85 percent occupied over the last 2 years, and therefore 85 percent (2,287 trips) of the total existing 2,690 trips generated under the full buildout capacity (100 percent occupancy) of the shopping center[11] are credited to the proposed redevelopment project. It should be noted that if 100 percent occupancy was assumed for the existing shopping center, the trips credited would have been even higher. An 85 percent occupancy assumption is considered a conservative estimate since ITE is based on gross lease area, which typically includes unoccupied units between 5 percent and 15 percent.

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[8] "CEQA Guidelines defines a major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[9] The Santa Clara Valley Transportation Authority (VTA) defines a "major bus stop" as a stop where six or more buses per hour stop during the peak period and is also referred to as a "high-quality transit" area.

[10] Santa Clara Valley Transportation Authority, Bus Schedules for Bus 23, 25, 53, 54, 55, 81, and 323. http://www.vta.org/routes/, accessed June 11, 2019. Also see Table 1 in *Westport Cupertino – Transportation Analysis*, dated November 27, 2019, in Appendix H of this Draft EIR.

[11] Existing trips were calculated using the *ITE Trip Generation Manual*, 10th Edition.

Additionally, the existing shopping center currently experiences pass-by trips in the PM peak hour. Accordingly, 34 percent (78 trips) reduction of the total 230 PM peak hour trips is applied.

4.8.3 EXISTING CONDITIONS

This section describes the existing transportation facilities in the project area, including the roadway network, bicycle and pedestrian facilities, public transit network, and current intersection and roadway segment operations. This section presents the existing conditions in the project area as they relate to the selected study intersections identified above.

4.8.3.1 EXISTING ROADWAYS

The project site is served by SR-85, an east-west freeway that extends from US 101 in south San José to US 101 in Mountain View. Within the city of Cupertino, SR-85 is generally a north-south oriented eight-lane freeway with six mixed-flow lanes and two carpool lanes, which are also known as high-occupancy vehicle (HOV) lanes. These lanes restrict use to vehicles with two or more persons, motorcycles, or special vehicles during the morning and evening peak commute hours (5:00 to 9:00 a.m. and 3:00 to 7:00 p.m.). Auxiliary lanes, which run from an entrance ramp to the next exit ramp, are only provided along SR-85 from Interstate 280 (I-280) to Stevens Creek Boulevard. Access to and from the city of Cupertino is provided via interchanges at I-280, Stevens Creek Boulevard, and South De Anza Boulevard. The key roadway segments within the project area are described below.

- **Stevens Creek Boulevard** is a six-lane divided roadway classified in the Cupertino General Plan Mobility Element as an “arterial” that begins at in the hills of Santa Clara County to the west and ends at Bascom Avenue in the east, where it continues as San Carlos Street. Stevens Creek Boulevard is mostly commercial and residential, and provides access to SR-85, I-280, and I-880. Stevens Creek Boulevard can be used to access locations west and east of Cupertino, such as rural Santa Clara County, San José, and Santa Clara. Access to the existing shopping center is available from Stevens Creek Boulevard.
- **Mary Avenue** is a two-lane undivided roadway classified in the Cupertino General Plan Mobility Element as a “neighborhood connector” roadway. It begins at Meteor Drive to the north and ends at Stevens Creek Boulevard to the south. Access to the existing shopping center is available from Mary Avenue via two driveways on the northern side of the project site.
- **SR-85 Northbound On-Ramp** is a two-lane on-ramp and leads to a roadway classified in the Cupertino General Plan Mobility Element as a “Freeway and Expressway” roadway. It begins at Stevens Creek Boulevard to the south and becomes an auxiliary lane to the north, where is ends at I-280. This roadway segment provides access to locations in northern Cupertino and beyond. There is no access to the project site from this location.

4.8.3.2 EXISTING WITHOUT PROJECT CONDITIONS

The existing conditions without the proposed project for intersections, pedestrian and bicycle facilities, as well as transit services are discussed below.

Existing without Project Intersection Operations

The results of the level of service and delay analysis for "Existing without Project" conditions are presented in Table 4.8-3. The results of the intersection level-of-service analysis show that both study intersections currently operate at LOS C during both the AM and PM peak hours of traffic, which is an acceptable level of service.

TABLE 4.8-3 EXISTING WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

ID #	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS
1	Stevens Creek Boulevard/Mary Avenue	Cupertino	D	AM	31.5	C
				PM	34.9	C
2	Stevens Creek Boulevard/SR-85 NB Ramp Terminal	Caltrans	E	AM	30.0	C
				PM	24.7	C

Notes: NB = northbound.
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 3 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 1 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

Existing without Project Queuing

As previously stated, a queuing analysis was prepared to identify potential impacts with respect to vehicular queuing at the Stevens Creek Boulevard/SR-85 North Bound Ramp Terminal intersection #2. Currently, the westbound right turn has no signal and is referred to as being "free." In other words, the driver does not have to stop and is free to make the right turn heading northbound on SR-85. Under existing conditions, the north leg of this intersection has a two-stage crosswalk that allows a pedestrian or cyclist to cross the "free" westbound right-turn lane when there is a gap in traffic or traffic stops for them and wait on the small refuge median (island) provided. Only then can they cross the on-ramp lanes using the pedestrian signal-controlled crosswalk.

The 95th percentile queue for the westbound right turn is zero in Existing without Project conditions because the movement is a "free" right turn, and cars can perform the movement without stopping. Because vehicles currently yield to pedestrians using the two-stage crosswalk at the northbound on-ramp and the low bicycle and pedestrian volumes do not generate queues when vehicles yield to them as they cross the westbound right-turn movement.

Existing without Project Pedestrian, Bicycle, and Transit Facilities

Pedestrian Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals. Pedestrian connectivity immediately surrounding the project site is provided by a mostly complete network of sidewalks and crosswalks. Continuous sidewalks exist along both Mary Avenue and Stevens Creek Boulevard. The Stevens Creek Boulevard/Mary Avenue intersection #1 provides marked crossings for pedestrians and bikes on the intersection's north, east, and south legs. Additionally, a marked crosswalk with a flashing beacon on Mary Avenue provides access to the project site from the Cupertino Memorial Park and

Cupertino Senior Center. As previously stated, the Stevens Creek Boulevard/SR-85 North Bound Ramp Terminal intersection #2 has a two-stage crosswalk that allows a pedestrian to cross the "free" westbound right-turn lane when there is a gap in traffic or traffic stops for them and wait on the small refuge median (island) provided. Only then can they cross the on-ramp lanes using the pedestrian signal-controlled crosswalk. This two-stage crosswalk is also used by bicyclists in the same manner.

Bicycle Facilities

The 2016 Bike Plan includes recommendations for new improvements in the project vicinity. These improvements include a Class IV separated bikeway along Stevens Creek Boulevard, connecting the project site to the area west of SR-85; a Class I bike path on the west side of the project site connecting to Stevens Creek Boulevard to the south and Mary Avenue to the north, and a bike bridge over SR-85 connecting Mary Avenue to Alhambra Avenue.[12] The sections of the Class IV separated bikeway and Class I bike path would also serve as part of the greater Cupertino Loop Trail.[13] The proposed project, like all future developers, is required to contribute to implementing the recommended pedestrian and bike improvements in the project area. Bicycle facilities are categorized into the following types of bikeways:

- **Class I Bike Path**: A completely separated right-of-way for the exclusive use of bicycles and pedestrians, with crossflow minimized. Near the project site, Class I bike paths are provided on the Mary Avenue Bridge from Mary Avenue to Homestead Road.
- **Class II Bike Lane:** A striped bike lane for one-way bike travel on a street or highway that is designed for the exclusive use of cyclists with certain exceptions. For instance, right-turning vehicles must merge into the lane before turning. Class II bike lanes within the project area are on Mary Avenue and Stevens Creek Boulevard.
- **Class III Bike Route:** A route where cyclists share the road with motor vehicles. These can be streets with low traffic volumes that are well-suited for bicycling or arterials where it is infeasible to widen the roadway to provide a bike lane due to right-of-way or topographical constraints. Class III bikeways may also be defined by a wide curb lane and/or use of a shared use arrow stencil marking on the pavement, known as a "sharrow." No Class III bike routes are currently located in the project area.
- **Class IV Separated Bikeway:** A bikeway that is on-street and separated from vehicles traffic by a physical protection, includes a curb, on-street parking, flexible bollards, or concrete planters. No Class IV separated bikeways are currently located in the project area.

Public Transportation *Facilities*

Public transit service in Cupertino is provided by VTA-operated bus service and Caltrain-operated commuter heavy rail service.

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[12] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-7, Bikeway Projects, page 3-8.

[13] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-8, Cupertino Loop Trail, page 3-9.

Bus Service

Nearby transit services are shown in Table 4.8-4 as well as the destinations, distance to the project site, hours/days of operation, and service frequencies for transit services within walking distance. As previously described, the project site is within one-half mile of a "major transit stop" as defined by CEQA Guidelines Section 15191[14] and the VTA.[15]

TABLE 4.8-4 EXISTING TRANSIT SERVICE

Routes	From	To	Distance to Nearest Stop	Weekdays	
				Operating Hours[a]	Peak Headway[b]
VTA Local Bus Routes[c]					
23	De Anza College	Alum Rock Transit Center	0.25 miles	5:30 am to 1:00 am	10 minutes
25	De Anza College	Alum Rock Transit Center	0.4 miles	5:00 am to 11:30 pm	10 minutes
53	De Anza College	Sunnyvale Transit Center	0.4 miles	6:50 am to 7:10 pm	60 minutes
54	De Anza College	Lockheed Martin Transit Center	0.4 miles	6:00 am to 9:30 pm	30 minutes
55	De Anza College	Great America Parkway	0.4 miles	5:30 am to 11:00 pm	30 minutes
81	Moffett Field / Ames Center	San José State University	0.25 miles	6:00 am to 9:00 pm	30 minutes
Limited Bus Stop Routes					
323	Downtown San José	De Anza College	0.4 miles	7:00 am to 10:30 am	20 minutes

Notes: AM = morning commuter period; PM = evening commute period; VTA = Santa Clara Valley Transportation Authority
a. Operating hours consider earliest and latest stop at each bus lines closest stop to the project site.
b. Headways are defined as the time interval between two transit vehicles traveling in the same direction over the same route.
c. According to VTA, the Stevens Creek Boulevard will be served by Rapid Bus Line 523 by the end of 2019.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018. (see Table 1 of the *Westport Cupertino – Transportation Analysis*, provided in Appendix H of this Draft EIR.

Commuter Rail Service

Caltrain is a commuter heavy rail service that runs from downtown San Francisco (4th and King Streets) to downtown San Jose (Diridon Station), with a limited number of commute period trains running farther south to Gilroy. During commute periods, Caltrain offers express service ("Baby Bullet") between downtown San Jose and San Francisco. Currently, Baby Bullet service is provided both in the northbound and southbound directions during the morning and evening commute periods at the Mountain View Caltrain station. Baby Bullet trains serve the Sunnyvale Caltrain station in the northbound direction during the morning peak and in the southbound direction during the evening peak. The nearest Caltrain station to the project site is the Sunnyvale station, which is located approximately 4 miles to north of the project

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[14] "CEQA Guidelines defines a major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[15] The Santa Clara Valley Transportation Authority (VTA) defines a "major bus stop" as a stop where six or more buses per hour stop during the peak period and is also referred to as a "high-quality transit" area.

site. During the weekdays, service in the northbound direction begins at 4:40 a.m. and ends at 10:40 p.m. In the southbound direction, service at this station begins at 6:14 a.m. and ends at 1:20 a.m. During the weekends, northbound service begins at 7:10 a.m. and ends at 10:40 p.m. Southbound service begins at 9:40 a.m. and ends at 1:26 a.m. For passengers arriving by bicycle, there are 18 bike racks and 24 bicycle lockers. Vehicle parking at this location includes 122 parking spaces.

4.8.3.3 EXISTING TRIP GENERATION AND VEHICLE MILES TRAVELED

The existing shopping center generated trips are based on an 85 percent occupancy rate, which was the rate of occupancy during 2017 and 2018. (see Table 4.8-5 below). The existing shopping center has an approximate annual VMT of 2,782,747 miles.

4.8.4 THRESHOLDS OF SIGNIFICANCE

4.8.4.1 CEQA GUIDELINES APPENDIX G

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process, it was determined that development of the proposed project would not result in significant environmental impacts pursuant to the following significance standards and, therefore, are not discussed in this chapter.

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

Based on the Initial Study and comments received during the scoping process, it was determined that the proposed project could result in a potentially significant transportation impact if it would:

1. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

4.8.4.2 CUPERTINO INTERSECTION IMPACT CRITERIA

A project would create a significant adverse impact on traffic conditions at a signalized intersection in the city of Cupertino if for either AM or PM peak hour:

1. The level of service at the intersection under background conditions drops below its level of service standard when project traffic is added, <u>or</u>

2. The level of service at the intersection operates below its level-of-service standard under background conditions, and the addition of project traffic causes both the critical-movement delay at the intersection to increase by four or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (0.01) or more. An exception to this applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical

movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 1 percent (0.01) or more.

4.8.5 IMPACT DISCUSSION

TRANS-1 **The proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

Trip Distribution and Assignments

The proposed project would have one access point from Stevens Creek Boulevard and three access points from Mary Avenue (see Figure 3-4 in Chapter 3, Project Description, of this Draft EIR.) The below-grade parking at Residential-Retail Building 1 would be accessed from the central access point on Mary Avenue.

Residential Trip Distribution

Residential project trips are not anticipated to use the central access points on Mary Avenue because they are for access to the retail uses. Trips were distributed throughout the roadway network with approximately 8 percent (AM and PM peak) of trips to/from the north on Mary Avenue and approximately 68 percent (AM and PM peak) of trips to/from the west on Stevens Creek Boulevard and approximately 24 percent (AM and PM peak) of trips to/from the east on Stevens Creek Boulevard. Figures 3 and 4 in the 2018 *Westport Cupertino – Transportation Analysis* and Figure 9 in 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR show the distribution for residential trips and the proposed project trip assignment for AM and PM peak hour periods, respectively.

Retail Trip Distribution

Retail project trips are not anticipated to use the most northern access points on Mary Avenue because they are primarily for access to the residential units. Trips were distributed throughout the roadway network with approximately 35 percent (AM and PM peak) of trips to/from the north on Mary Avenue, approximately 30 percent (AM and PM peak) of trips to/from the west on Stevens Creek Boulevard, and approximately 30 percent (AM and PM peak) of trips to/from the east on Stevens Creek Boulevard. Approximately 5 percent (AM and PM peak) of the trips are anticipated to use Parkwood Drive (just north of the site). No trips were distributed at the driveway entrance to the Cupertino Senior Center and Cupertino Memorial Park because retail visitors are expected to walk to the stores using the crosswalk with a flashing beacon on Mary Avenue. The trips distributed along Mary Avenue are expected to already be on the roadway and are not new trips for the proposed project, because the existing site is currently used for retail purposes. Figures 5 and 6 in the 2018 *Westport Cupertino – Transportation Analysis* and Figure 8 in the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR show the distribution for retail trips and the proposed project trip assignment for AM and PM peak hour periods, respectively.

Trip Generation

The proposed project trip estimates before and after taking the trip reductions and credits described above in Section 4.8.2.5, Trip Reductions and Credits, are shown in Table 4.8-5. As shown the proposed project would generate 3 fewer (or negative 3) inbound trips and 50 new outbound trips during the AM peak hour, and 4 new inbound and 26 fewer (or negative 26) outbound trips during the PM peak hour.

TABLE 4.8-5 PROJECT TRIP GENERATION ESTIMATES

	Daily	AM Peak Hour			PM Peak Hour		
Land Use	Trips	In	Out	Total	In	Out	Total
Proposed Uses[a]							
Townhomes and Rowhouses (88 units)	646	9	31	40	31	18	49
Residential-Retail Building 1 (115 units)	626	11	30	41	31	20	51
Residential-Retail Building 2 (Senior Housing) (39 units)	146	3	5	8	6	4	10
Residential-Retail Buildings (Retail) 20,000 square feet)	756	12	7	19	36	40	76
Total Project Trips Before Trip Reductions	*2,174*	*35*	*73*	*108*	*104*	*82*	*186*
Trip Reductions							
Internal Capture[b]	-186	-1	-1	-2	-14	-14	-28
Transit Priority Area (VTA Major Bus Stop)[c]	-28	-1	-1	-2	-1	-1	-2
Pass-By Trips for Proposed on-site Retail[d]	-26	0	0	0	-12	-14	-26
Total Project Trips After Trip Reductions	*1,934*	*33*	*71*	*104*	*77*	*53*	*130*
Existing Conditions Credits							
Oaks Shopping Center[e]	2,209	36	21	57	73	79	152
Net Project Trips	**-275**	**-3**	**50**	**47**	**4**	**-26**	**-22**

Notes:

a. Trip generation based on daily trip generation rates in the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition, which applies Code 220 for low-rise dwelling units; Code 221 for mid-rise dwelling units; Code 252 for senior units; and, Code 820 for retail.

b. Internal trip capture is the portion of trips generated by a mixed-use development that both begin and end within the development.

c. The Santa Clara Valley Transportation Authority permits a 2 percent credit for being located near a major transit facility.

d. A pass-by trip is a trip that already exists on the network. Pass-by trip rates are based on the ITE Trip Generation Appendix E 3rd Generation. Pass-by credits apply to the proposed project and to existing conditions.

e. The existing trips credited are a total of 85 percent (2,287 trips) of the maximum trips (2,690 trips) if the shopping center were fully occupied minus 34 percent (78 trips) of the total 230 PM peak hour trips that make up the by-pass credits which apply to the existing shopping center.

Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, November 2018. (see Table 2 of the *Westport Cupertino – Transportation Analysis* in Appendix H of this Draft EIR).

Level of Service

Existing plus Project Conditions

Under Existing plus Project conditions, the intersection levels of service were calculated for the Stevens Creek Boulevard/Mary Avenue intersection #1 using existing lane geometry and traffic control because no improvements are proposed at this intersection. The intersection levels of service at the Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal intersection #2 were calculated assuming the project's proposed signalized westbound right-turn configuration described above in Section 4.8.2.1, Study Intersections. Both intersections were evaluated with existing peak hour traffic volumes plus the traffic volumes added by the proposed project to evaluate the operating conditions of the intersections and identify potential impacts to the roadway system.

The results of the intersection level-of-service calculations for Existing plus Project conditions are presented in Table 4.8-6.[16] As shown both intersections would operate under acceptable level-of-service standards, LOS C. Therefore, the proposed project's impact at both intersections is considered *less than significant*.

TABLE 4.8-6 EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE RESULTS

					Existing without Project		Existing plus Project	
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS	Delay	LOS
1	Stevens Creek Boulevard/ Mary Avenue	Cupertino	D	AM	31.5	C	32.6	C
				PM	34.9	C	34.8	C
2	Stevens Creek Boulevard/ SR-85 NB Ramp Terminal	Caltrans	E	AM	30.0	C	34.3	C
				PM	24.7	C	23.0	C

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 4 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 5 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

Cumulative without Project Conditions

Traffic operations were evaluated for 2040 Cumulative without Project conditions under the assumption that the Cumulative without Project conditions intersection geometry of the Stevens Creek Boulevard/Mary Avenue intersection #1 and Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal intersection #2 would be the same as that under the Existing without Project conditions. The results of the intersection level-of-service calculations for Cumulative without Project conditions are presented in Table 4.8-7.

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[16] This is for informational purposes only since the proposed project is not anticipated to be fully operational until 2023.

TABLE 4.8-7 CUMULATIVE WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE RESULTS

ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Existing without Project Delay	Existing without Project LOS	Cumulative without Project Delay	Cumulative without Project LOS
1	Stevens Creek Boulevard/ Mary Avenue	Cupertino	D	AM	31.5	C	47.7	D
				PM	34.9	C	46.3	D
2	Stevens Creek Boulevard/ NB SR 85 On/Off Ramps	Caltrans	E	AM	30.0	C	46.1	D
				PM	24.7	C	20.3	C

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 5 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 5 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

As shown both intersections would operate under acceptable level-of-service standards, LOS D (intersection #1) and LOS D during AM peak hour and LOS C for PM peak hour (intersection #2). It should be noted that for intersection #2, the PM peak hour reported delay improved with Cumulative without Project conditions because the trips were predominately added to noncritical movements, which had a lower movement delay than the average intersection delay, and thereby decreases the overall average delay. Therefore, the proposed project's impact at both intersections would be *less than significant*.

Cumulative plus Project Conditions

For the Stevens Creek Boulevard/Mary Avenue intersection #1 and Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal intersection #2, it is assumed that the Cumulative plus Project conditions intersection geometry would be the same as Existing plus Project conditions.

The results of the intersection level-of-service calculations for Cumulative conditions are presented in Table 4.8-8. As shown both intersections would operate under acceptable level-of-service standards, LOS D (intersection #1) and LOS C (intersection #2). Therefore, the proposed project's impact at both intersections would be *less than significant*.

TABLE 4.8-8 CUMULATIVE PLUS PROJECT INTERSECTION LEVEL OF SERVICE RESULTS

ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Cumulative without Project Delay	Cumulative without Project LOS	Cumulative plus Project Delay	Cumulative plus Project LOS
1	Stevens Creek Boulevard/ Mary Avenue	Cupertino	D	AM	47.7	D	49.1	D
				PM	46.3	D	46.3	D
2	Stevens Creek Boulevard / NB SR 85 On/Off Ramps	Caltrans	E	AM	46.1	D	47.6	D
				PM	20.3	C	24.7	C

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 6 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 5 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

Queuing

Existing plus Project and Signalized Conditions for the Westbound Right-turn Movement Conditions

For this scenario it was projected that the proposed project would increase bicycle and pedestrian volumes by 20 percent at the crosswalk. This is based on the assumption that the improved facility and the added residential units from the proposed project would generate more pedestrian and bicycle demand.

With the addition of the proposed signal control for the westbound right-turn movement, the cars would have a continuous green right-turn arrow until a cyclist or pedestrian arrives and activates the pedestrian or bike crossing signal, at which time a red right-turn arrow would stop the cars. Right turns on red would not be allowed for the westbound right-turn movement to prevent cars from yielding (instead of stopping) to pedestrians.

This pedestrian/bicycle signal call could only occur on the east-west signal phasing plan of the intersection when there are no other conflicting movements with the pedestrian and/or bicycle phase. Queues would only form in the westbound right-turn pocket when the right-turn arrow is red. Furthermore, to provide a conservative (i.e., worst case) evaluation, only a pedestrian signal was analyzed because a pedestrian crossing time is longer than a bicycle crossing time. A shorter bicycle crossing time would produce shorter vehicle queues in the westbound right-turn lane than would occur with a longer pedestrian crossing time.

Queues would be generated by the vehicles stopping and waiting for a pedestrian or bicycle to cross when they have triggered the light and the right-turn arrow is red. Queue results after the five SimTraffic mircosimulations and HCM 2000 level-of-service results for the westbound right-turn lane are shown in Table 4.8-9.[17] As shown previously in Table 4.8-6, the overall level-of-service for the entire intersection would remain at an acceptable LOS C and as shown in Table 4.8-9no operational issues would result from the estimated queue lengths in the AM and PM peak hour conditions at the Stevens Creek Boulevard and SR-85 Northbound Ramp Terminal intersection #2. A graphic representation of the queue lengths is show on Figure 13 in 2019 *Westport Cupertino – SR 85 Interchange Analysis,* provided in Appendix H of this Draft EIR. These increases would be minimal and would not be substantial enough to cause operational issues along Stevens Creek Boulevard. Therefore, the proposed project's impacts in Existing plus Project and Signalized Conditions for the Westbound Right-turn Movement conditions would be *less than significant.*

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[17] The Simtraffic microsimulation model included two adjacent intersections (Stevens Creek Boulevard/Mary Avenue intersection #1 to the east and Stevens Creek Boulevard/SR-85 southbound ramp terminal intersection to the west in order to have accurate arrival patterns for the analysis of the Stevens Creek Boulevard and SR-85 Northbound Ramp Terminal Intersection #2, particularly the westbound right-turn movement. No analysis results were reported for these adjacent intersections, since the operations at these locations will remain unaffected with the proposed reconfiguration.

TABLE 4.8-9 EXISTING PLUS PROJECT SIGNALIZED CONDITIONS FOR THE WESTBOUND RIGHT-TURN MOVEMENT INTERSECTION LEVEL OF SERVICE AND QUEUEING RESULTS

					Existing plus Project		
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS[c]	Queue[d]
2	Stevens Creek Boulevard / SR-85 NB Ramp Terminal	Caltrans	E	AM	7.6	A	220 feet (9 cars)
				PM	8.0	A	243 feet (10 cars)

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. Represents the level of service with the controlled light at the right-turn lane only.
d. Vehicle queues are the 95th percentile. The 95th percentile queue length value indicates that a queue of this length or less would occur on 95 percent of the signal cycles that include a pedestrian or bicycle call.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 4 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 2 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

Cumulative plus Project and Signalized Conditions for the Westbound Right-turn Movement Conditions

Like the Existing plus Project and Signalized Conditions for the Westbound Right-turn Movement conditions discussed above, this scenario also assumes the project's proposed signal phasing conditions would be the same and that bicycle and pedestrian volumes would increase by 20 percent at the crosswalk with the proposed project.

Queue results after the five SimTraffic microsimulations and HCM 2000 level-of-service results for the westbound right-turn lane are shown in Table 4.8-10. As shown previously in Table 4.8-7, the overall level-of-service for the entire intersection would remain at an acceptable LOS D in the AM peak hour and LOS C in the PM peak hour. As shown in Table 4.8-10, no operational issues would result from the estimated queue lengths in the AM and PM peak hour conditions. A graphic representation of the queue lengths is shown on Figure 18 in 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR. These increases would be minimal and would not be substantial enough to cause operational issues along Stevens Creek Boulevard. Therefore, the proposed project's impacts in Cumulative plus Project and Signalized Conditions for the Westbound Right-turn Movement conditions would be *less than significant.*

TABLE 4.8-10 CUMULATIVE PLUS PROJECT SIGNALIZED CONDITIONS FOR THE WESTBOUND RIGHT-TURN MOVEMENT INTERSECTION LEVEL OF SERVICE AND QUEUEING RESULTS

					Existing plus Project			Cumulative plus Project		
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS[c]	Queue[d]	Delay	LOS[c]	Queue[d]
2	Stevens Creek Boulevard / SR-85 NB Ramp Terminal	Caltrans	E	AM	7.6	A	220 feet (9 cars)	8.2	A	246 feet (10 cars)
				PM	8.0	A	243 feet (10 cars)	11.1	B	284 feet (12 cars)

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. Represents the level of service with the controlled light at the right-turn lane only.
d. Vehicle queues are the 95th percentile. The 95th percentile queue length value indicates that a queue of this length or less would occur on 95 percent of the signal cycles that include a pedestrian or bicycle call.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 6 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 4 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

Construction Traffic

Demolition and on-site construction as well as off-site improvements would take place in two phases over a 16-month period and is anticipated to be completed by the year 2023, subject to regulatory approval. During this period, the proposed project would generate changes to the existing transportation conditions by adding construction-related trips to the network and modifying the network to install off-site infrastructure improvements that implement the 2016 Bike Plan. New traffic would be generated by construction employees and construction activities, including haul trucks. Construction traffic is temporary and would generate fewer trips than the proposed projected trips during project operation. During the construction phase of the proposed bikeway, a portion of the lane on Steven's Creek Boulevard may be closed. However, like construction traffic, this would a temporary and short-term phase. As discussed above, the proposed project would not result in a significant impact at any study intersection.

Significance Without Mitigation: Less than significant.

Pedestrian Facilities

The proposed project is expected to increase the number of pedestrians using the existing sidewalks and crosswalks in the area by 20 percent. The proposed project includes an internal sidewalk and bicycle network, in addition to sidewalk modifications along Stevens Creek Boulevard and Mary Avenue. The sidewalk modifications would include detaching the sidewalk along Stevens Creek Boulevard and required modifications along Mary Avenue to facilitate on and offsite improvements.

The project site would continue to be accessible to pedestrians from Mary Avenue and Stevens Creek Boulevard, and on-site network would provide pedestrian and bicycle circulation within the project site. The overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site. The proposed project would not eliminate or impede any existing pedestrian facilities, nor would it conflict with any of the goals and policies in the City's Pedestrian Plan.

Bicycle Facilities

There are existing bicycle facilities in the immediate vicinity of the project site. As described in the existing conditions section above, the 2016 Bike Plan includes recommendations for a new Class IV separated bikeway along Stevens Creek Boulevard, a new Class I bike path on the west side of the project site, and a bike bridge over SR-85 connecting Mary Avenue to Alhambra Avenue.[18]

As stated previously in this chapter, the proposed project would install a Class IV separated bikeway on the portion of Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp and the associated signal and reconfigured intersection features. This reconfiguration would convert the existing westbound "free" right-turn lane to a signal-controlled right-turn movement to allow for an exclusive,

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[18] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-7, Bikeway Projects, page 3-8.

protected phase for pedestrians and cyclists to cross the on-ramp leg. The purpose of this reconfiguration is to increase pedestrian and bicycle safety when crossing the on-ramp leg. Figure 2 in the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR shows the proposed improvement. This would allow a pedestrian or cyclist to then cross the on-ramp in one phase (i.e., the current two-stage crossing procedure would be eliminated). For the purposes of this analysis the total crosswalk length was determined to be 85 feet, which requires approximately 25 seconds (at a walking speed of 3.5 feet per second) for the pedestrian clearance interval. Right turn on red would not be allowed for the westbound right-turn movement to prevent cars from yielding (instead of stopping) to pedestrians.

The proposed project would also install the Class I bike path on the western portion of the project site to connect Stevens Creek Boulevard to Mary Avenue and would include public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue. The proposed project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. These sections of the Class IV separated bikeway and Class I bike path would also serve as part of the greater Cupertino Loop Trail.[19] The bridge would also be part of the greater Bike Boulevard in the city.[20] The vehicular access to the proposed project site would remain similar to the existing conditions and would not eliminate or impede the existing bicycle facilities.

The proposed project would include a total of 117 bicycle parking spaces, consisting of five Class 1 facilities for retail uses, 18 Class 2 facilities for retail uses, 78 Class 1 facilities for residential uses, and 16 Class 2 facilities for residential uses.[21] Bike facilities would be located adjacent to Buildings 1 and 2, in addition to within the proposed buildings. Therefore, the proposed project would not obstruct or hinder the implementation of the City's 2016 Bike Plan and would support the use of bicycling by providing adequate bike facilities for guests and employees.

Transit

The project site is served by existing VTA bus routes. The closest bus stops are located within 0.25 miles of the project site, providing access to local bus routes 23 and 81. Five additional bus routes are located approximately 0.4 miles from the project site, providing access to local buses 25, 53, 54, and 55, in addition to rapid transit route 323. The VTA has not established policies or significance criteria related to transit vehicle delay. The new transit trips generated by the proposed project are not expected to create a significant demand in excess of the capacity of the transit service that is currently provided.

The proposed project would also install a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 Northbound Ramp. The precise design-level details will need to be

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[19] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-8, Cupertino Loop Trail, page 3-9.

[20] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-10, Bike Boulevard projects, page 3-11.

[21] Class 1 bicycle parking spaces include bicycle lockers or secure rooms and Class 2 bicycle parking spaces are publicly accessible bicycle racks.

coordinated with VTA and City of Cupertino. For this EIR, it is assumed the bus stop would include a concrete bus pad and bus shelter.

In summary, the proposed project would not exceed the City's level-of-service standards for vehicular transportation, and there would be adequate availability of alternative modes of travel including pedestrian, bicycle, and transit in the project area. The proposed project would not displace, modify, or interfere with any transit stop, sidewalk, or bicycle lanes. In addition, the proposed project would not generate a demand for transit that would exceed the capacity of the system. Therefore, the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Accordingly, impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

TRANS-2 The proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

CEQA Guidelines Section 15064.3 was added to the updated CEQA Guidelines on December 28, 2018. Section 15064.3 describes specific considerations for evaluating a project's transportation impacts. As stated in Section 15064.3(a), vehicle-miles traveled or VMT is the most appropriate measure of transportation impacts, and pursuant to Section 15064.3(b)(1) land use projects should be analyzed based on VMT.

The proposed project is a residential mixed-use development on an infill site recognized as a PDA and a TPA by the regional *Plan Bay Area* 2040 prepared by ABAG and MTC. An overarching goal of the regional *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. In addition, the project site was evaluated in the General Plan EIR[22] as a High Priority Housing Element site by the City of Cupertino.

As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 under General Plan buildout conditions. The proposed project would construct a 242 residential units, and 20,000 square feet of retail space, which is consistent with the land use evaluated in the General Plan EIR, and therefore, would not directly result in any additional new population growth or employment growth beyond what was analyzed in the General Plan EIR. Accordingly, implementation of the proposed project would be consistent with and would have no effect on the VMT estimates presented in the General Plan EIR.

Project-specific VMT was determined using CalEEMod and was calculated for Existing and Existing plus Project conditions. As previously stated, the existing commercial space (71,250 square feet), with an 85 percent occupancy rate produces an approximate annual VMT of 2,782,747 miles, or a daily VMT of 7,624

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[22] City of Cupertino General Plan (Community Vision 2015–2040, Appendix B: Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93.

miles. The proposed project would produce an approximate annual VMT of 2,662,683 miles, or a daily VMT of 7,295 miles. This would be a reduction of approximately 120,064 miles annually, or 329 miles daily.

The proposed project would be consistent with the analysis conducted in the General Plan EIR, and implementation of the proposed project would reduce VMT from the proposed project at the project site. Therefore, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) and impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.8.6 CUMULATIVE IMPACTS

TRANS-3 **The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in additional cumulatively considerable impacts.**

The analysis of the proposed project, above, addresses cumulative impacts to the transportation network in the city and its surroundings; accordingly, cumulative impacts would be the same as those discussed above and no additional analysis is warranted.

Significance Without Mitigation: Less than significant.

4.9 UTILITIES & SERVICE SYSTEMS

Based on the analysis in the Initial Study (see Appendix A of this Draft EIR) and comments received during the scoping process, it was determined that construction and operation of the proposed project would not result in significant environmental impacts related to the following significance standards and, therefore, are not discussed in this chapter.

- Require or result in the construction of new water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects.
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Comply with federal, state, and local statutes and regulations related to solid waste.

Therefore, this chapter includes an evaluation of the potential environmental consequences associated with wastewater treatment capacity. This chapter also describes the environmental setting, regulatory framework, existing setting, and identifies mitigation measures that would avoid or reduce significant impacts.

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

This section describes federal, State, and local regulations that apply to wastewater utilities, specifically the capacity of wastewater treatment systems.

Federal

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the

NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage (i.e., wastewater) treatment plant.

State

On May 2, 2006 the State Water Resource Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to the nine Regional Water Quality Control Boards (RWQCB) to enforce these requirements within their regions. The San Francisco Bay RWQCB (Region 2) issues and enforces NPDES permits in Cupertino. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste, and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Local

Cupertino Municipal Code

The Cupertino Municipal Code (CMC) includes various directives to help ensure wastewater treatment capacity and sewer infrastructure is adequate to serve the residents and employees of Cupertino. The provisions related to potential impacts from the proposed project are included in Title 15, Water and Sewage; and Title 16, Buildings and Construction, as follows:

- **Chapter 16.58, Green Building Standards Code Adopted.** This chapter describes the California Green Building Standards adopted by the City, and any local amendments made with indications of additions or amendments to the State Standards. The Green Building Ordinance for the City of Cupertino provides minimum Green Building Requirements for new construction, and renovation and additions.
- **Chapter 15.20, Sewage Disposal Systems.** This chapter establishes standards for the approval, installation, and operation of individual onsite sewage disposal systems consistent with the California Regional Water Quality Board standards. The chapter sets regulations for connecting to public sanitary sewer system, including required permits, soil test requirements, and procedures for plan approval by the Health Officer.

Cupertino Sanitary District Operations Code

The Cupertino Sanitary District (CSD) provides sanitary sewer service to Cupertino, portions of Saratoga, Sunnyvale, Los Altos, and surrounding unincorporated Santa Clara County communities. Chapter IV of Cupertino Sanitary CSD's Operations Code requires all new buildings within the CSD to be connected to the CSD sewer system and all land development projects to include provisions for future buildings to connect to the CSD's sewer system. Article 3 of Chapter VI of the CSD's Operations Code requires a Wastewater Discharge Permit before connecting to or discharging into a CSD's sewer. The Wastewater Discharge Permit would be attached to a specific duration, which cannot exceed 5 years.

Cupertino Sanitary District Sewer System Management Plan

The SSMP was prepared in compliance with SWRCB Order 2006-0003: Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (GWDR), as revised by Order No. WQ 2008-0002.EXEC on February 20, 2008. The GWDR prohibits sanitary sewer overflows, requires reporting of sanitary sewer overflows using the statewide electronic reporting system, and requires the preparation of an SSMP.

The SSMP is also required by the San Francisco Bay RWQCB. Requirements are outlined in the *Sewer System Management Plan Development Guide* dated July 2005, developed by the RWQCB in cooperation with the Bay Area Clean Water Agencies.

The CSD is one of a number of stakeholder agencies within a local watershed area of Santa Clara County; each is accountable by permit to the SWRCB under the Clean Water Act. These stakeholders include:

- San José/Santa Clara Regional Wastewater Facility, Department of Environmental Services
- Santa Clara Valley Water District
- Cities of Cupertino, Saratoga, Sunnyvale, Santa Clara, Los Altos and San José
- Santa Clara County Roads and Airports and Public Works Departments

Other stakeholders include the Santa Clara County Environmental Services Department, California Department of Fish and Wildlife, and several privately organized environmental groups.

4.9.2 EXISTING CONDITIONS

4.9.2.1 CUPERTINO SANITARY DISTRICT

The CSD provides sanitary sewer services for the project site. Wastewater would be treated at the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP).

The CSD maintains approximately 194.5 miles of sewer mains including the infrastructure in the vicinity of the project site.[1] The collected wastewater from the CSD service area is conveyed to the SJ/SCWPCP through mains and interceptor lines shared with both the cities of San José and Santa Clara. The CSD is one of five tributary agencies that have a contractual treatment allocation agreement with the SJ/SCWPCP. The CSD has a contractual treatment allocation with the SJ/SCWPCP of 7.85 million gallons

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[1] Cupertino Sanitary District, 2016, Sewer Management Plan, page 23.

per day (mgd), on average. In 2014, at the time of the General Plan EIR,[2] CSD wastewater flow to the SJ/SCWPCP was 5.3 mgd.[3]

The CSD wastewater system also flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara is 13.8 mgd during peak wet weather flows. The existing CSD peak wet weather flow into the Santa Clara system is modeled at 13.29 mgd.[4]

4.9.2.2 EXISTING ON-SITE USES

The project site is currently occupied by an approximately 71,250 square-foot shopping center that is currently in operation. Based on the May 2007 *City of Santa Clara Sewer Capacity Assessment* and the estimated wastewater generation rate 0.3 gpd per square foot of retail space, the existing uses generate approximately 21,376 gallons per day (gpd) or 0.0213 million gallons per day (mgd).[5]

4.9.3 THRESHOLDS OF SIGNIFICANCE

An Initial Study was prepared for the proposed project (see Appendix A of this Draft EIR). Based on the analysis contained in the Initial Study and comments received during the scoping process, it was determined that development of the proposed project would not result in significant environmental impacts related to the following significance standards and, therefore, are not discussed in this chapter.

- Require or result in the construction of new water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects.
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Comply with federal, state, and local statutes and regulations related to solid waste.

Based on the Initial Study and comments received during the scoping process it was determined that the proposed project could result in a potentially significant wastewater related impact if it would:

1. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

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[2] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

[3] City of Cupertino, General Plan (Community Vision 2015–2040), Appendix B, Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93.

[4] Mark Thomas, February 20, 2019, Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara.

[5] 71,250 sf retail x 0.3 gpd per square foot = 21,376 gpd or 0.0213 mgd.

4.9.4 IMPACT DISCUSSION

UTIL-1 The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the proposed project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Based on the May 2007 *City of Santa Clara Sewer Capacity Assessment*, the estimated wastewater generation rate for residential uses is 133 gallons per day (gpd) per unit, and 0.3 gpd per square foot of retail space. Applying these generation rates, the proposed 242 residential units and the 20,000 square feet of retail space would generate approximately 38,186 gpd or 0.0382 mgd of wastewater.[6] As described in Section 4.9.2.2, Existing On-Site Uses, the operational shopping center currently generates about 21,376 gpd or 0.0213 mgd. Therefore, the net increase for the proposed project is 16,810 gpd or 0.0168 mgd.[7]

The SJ/SCWPCP currently has a total capacity of 450 mgd. Combined, the proposed project's net increase of wastewater generation of 0.0168 mgd and the current wastewater generated system-wide of 105 mgd, the proposed project would not exceed the SJ/SCWPCP's current total capacity of 450 mgd.

The CSD has a contractual treatment allocation of 7.85 mgd Average Daily Dry Flow with the SJ/SCWPCP. At the time of the General Plan EIR, the wastewater generation of 5.3 mgd was estimated by the CSD.[8] The existing wastewater flow of 5.3 mgd plus the proposed project wastewater flow of 0.0168 mgd would not exceed the City's contractual allocation limit of 7.85 mgd. The proposed project is also within the amount of development (4,421 residential units and 1,343,679 commercial square feet) evaluated in the General Plan EIR;[9] therefore, no impact would result.

The CSD wastewater system flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara allows 13.8 mgd during peak wet weather flows for this portion of the Santa Clara sewer system. The existing CSD peak wet weather flow into the Santa Clara system is 13.29 mgd.[10] However, the estimated wastewater generation from the proposed project and from other potential projects, as established by the General Plan and other approved projects, is approximately 14.25 mgd, which is the total capacity needed to serve the General Plan buildout.[11]

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[6] (242 units x 133 gpd = 32,186 gpd) + (20,000 sf retail x 0.3 gpd per square foot = 6,000 gpd) = 38,186 gpd

[7] 38,186 gpd proposed generation – 21,376 gpd existing generation = 16,810 gpd (or 0.0168 mgd) net increase.

[8] City of Cupertino, General Plan (Community Vision 2015–2040), Appendix B: Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93.

[9] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

[10] Mark Thomas, August 29, 2019, Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara.

[11] Mark Thomas, August 29, 2019, Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara. Sewage coefficients use to calculate the sewer generation rates for the various uses in the project and the General Plan buildout were taken from the San Jose - Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient

Therefore, the proposed project, and other approved and potential projects as established by the General Plan 2040 buildout, will require a reduction in sewer generation from the CSD system prior to flowing into the City of Santa Clara system, or additional capacity rights will need to be acquired from the City of Santa Clara.

CSD performed smoke testing[12] on a portion of the sewer system in 2018. The results of the smoke testing showed that certain portions of their system are being impacted by inflow from illegal connections to the system. These illegal connections include area drains, catch basins, and roof rainwater leaders from both public and private facilities within the cities of Cupertino and Saratoga jurisdictions. These illegal connections collect storm water and direct the flow to the sewer system. Calculating the flows from these illegal connections, using the Manning's flow equation[13] and the size of the areas that flow to these connections, there is an addition of approximately 0.4 mgd to the sanitary sewer peak wet weather flow. Disconnecting these illegal connections and redirecting these storm water flows to the public storm drain system would result in a reduction of the sewer peak wet weather from 14.25 mgd to 13.85 mgd. Further investigation of the CSD system is anticipated and disconnection of additional illicit connects is expected, which would provide further potential reduction to the peak wet weather flow.

However, until such corrections to the system can occur, the operation of the proposed project would exceed the 13.8 mgd contractual limit through the City of Santa Clara sewer system resulting in a potentially significant impact.

Impact UTIL-1: Implementation of the proposed project may result in a determination by the wastewater treatment provider, which serves or may serve the proposed project, that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

> **Mitigation Measure UTIL-1:** No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods:
>
> 1) Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or
>
> 2) Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD.

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table and from the City of Santa Clara Sanitary Sewer Capacity Assessment, May 2007, as well as CSD estimated flow rates based on measured water usages.

[12] Many municipalities implement smoke testing programs to assess the condition of sanitary sewer system. Smoke testing is the process of injecting artificially produced smoke into a blocked off pipeline segment to see where the smoke emerges. If the line has defects, the smoke will find the break and try to escape through the break. Smoke testing is one of the best cost-effective ways to locate defects in the main sewer line and service laterals that connects to a site.

[13] The Mannings equation is an empirical equation that applies to uniform flow in open channels and is a function of the channel velocity, flow area and channel slope.

The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the *San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient* table in the May 2007, *City of Santa Clara Sanitary Sewer Capacity Assessment*,[14] and *California Green Building Standards*, unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD.

If the prior agreement between CSD and the City of Santa Clara that currently limits the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system were to be updated to increase the permitted peak wet weather flow sufficiently to accommodate the proposed project's flows, this would also change the impacts of the project to less than significant. If this were to occur prior to the City's approval of building permits, then Mitigation Measure UTIL-1 would no longer be required to be implemented.

Significance With Mitigation: Less than significant. Implementation of Mitigation Measure UTIL-1 would guarantee that no development on the project site could occur that would exceed the 13.8 mgd peak wet weather flow contractual limit through the City of Santa Clara and CSD by ensuring that no building permit would be issued for any structures or units that result in the contractual limit being exceeded until: (1) additional capacity is available through the City of Santa Clara's sewer system; (2) improvements are made to the CSD sewer system that reduce the peak wet weather flows that enter the City of Santa Clara system; (3) improvements are made on the project site that ensure the contractual limit is not exceed; or (4) the completion of any combination of these approaches that adequately addresses potential capacity issues.

UTIL-2 The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to wastewater treatment.

The impact discussion above is based on a cumulative setting because it considers the impacts of the proposed project in conjunction with the citywide wastewater generation and demand. All development within Cupertino is bound to the same treatment allocation contractual limits and contributes to demand on the SJ/SCWPCP wastewater treatment capacity. As discussed above, Mitigation Measure UTIL-1 is required to reduce the proposed project's contribution to the City of Santa Clara's sewer system. Therefore, no further discussion on cumulative impacts is necessary.

Significance With Mitigation: Less than significant.

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[14] Mark Thomas and Associates, July 19, 2018, Email communication with Cupertino Public Works.

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5. Alternatives to the Proposed Project

The CEQA Guidelines set forth the range of alternatives to be analyzed in an EIR. Section 15126.6(a) of the CEQA Guidelines states that:

> *An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.*

The following discussion is intended to inform the public and decision makers of a reasonable range of feasible alternatives to the proposed project that would avoid or substantially lessen any significant effect of the proposed project. This chapter describes the purpose of the alternatives discussion; provides a summary of the reasonable range of alternatives, including a summary of potentially significant impacts and the relationship of each alternative to the project objectives; and identifies the environmentally superior alternative.

5.1 PURPOSE

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

> *Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.*

5.2 POTENTIALLY SIGNIFICANT IMPACTS

All of the potential environmental impacts associated with development of the proposed project were found to be either less than significant without mitigation or less than significant with mitigation. No significant and unavoidable impacts would occur as a result of construction and operation of the proposed project. A list of the potentially significant impacts is provided in Table 2-2 in Chapter 2, Executive Summary, of this Draft EIR. The choice of alternatives to the proposed project is focused on alternatives that would further reduce or avoid the impacts found to be potentially significant, but less than significant with mitigation measures, as listed in Table 2-1.

The significant-but-mitigable impacts of the proposed project are the following:

- **Air Quality.** Construction impacts from emissions of fine particulate matter (PM_{10} and $PM_{2.5}$) and toxic air contaminants (TAC) from construction equipment.
- **Biological Resources.** Construction impacts to nesting birds and compliance with the City's tree preservation regulations.
- **Cultural and Tribal Cultural Resources.** Construction impacts to unknown subsurface archeological and tribal cultural resources.
- **Geology and Soils.** Construction impacts to unknown unique paleontological resources.
- **Noise.** Generation of a substantial temporary increase in ambient noise levels in the vicinity of the proposed project during construction.
- **Utilities and Service Systems.** Determination by the wastewater treatments provider that it does not have adequate capacity to serve the project's and cumulative projects projected demand.

5.3 PROJECT OBJECTIVES

As stated above, the range of alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the proposed project. The project objectives are as follows:

- Redevelop an existing retail center on Mary Avenue and Stevens Creek Boulevard with desirable amenities and housing.
- Meet the City's Regional Housing Needs Allocation (RHNA) for 2014-2022.
- Enhance the vibrancy of Cupertino's Heart of the City as a key mixed-use, commercial corridor by providing a pedestrian-friendly community that includes housing, open space and greenery, and neighborhood retail.
- Provide senior housing in close proximity to the Cupertino Senior Citizen Center.
- Create a prominent gateway development that incorporates quality architectural design and materials, open space, and artwork to announce entry into Cupertino's Heart of the City.
- Create a mixed-use development that places residential and commercial uses in close proximity to each other, and close to transit options.
- Help the City to achieve its affordable housing goals through the inclusion of senior housing units within a residential and mixed-use development project.

5.4 SELECTION OF A REASONABLE RANGE OF ALTERNATIVES

Section 15126.6(c) of the State CEQA Guidelines states:

> *The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the*

> *alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.*

5.4.1 ALTERNATIVES CONSIDERED AND REJECTED AS INFEASIBLE

As described above, Section 15126.6(c) of the State CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. Section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. The following is a discussion of alternatives that were considered and rejected, along with the reasons they were not included in the analysis.

5.4.1.1 ALTERNATIVE LOCATION

Development of the proposed project at an alternative location in the city was considered and rejected because it would not accomplish most of the basic objectives of the proposed project, would be infeasible, and would not substantially lessen or avoid any significant environmental impact. Because the proposed project is identified as a Priority Housing Element Site in the General Plan, locating the proposed residential mixed-use development on a different site would be inconsistent with the General Plan policies to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 to 2022 planning period.[1] The General Plan EIR considered 20 different housing element sites and prioritized five of those to be implemented as part of the Housing Element for the 2014 to 2022 planning period.[2] As described in Chapter 3, Project Description, of this Draft EIR, the proposed project would provide 242 residential units, including 39 senior residential units, within close proximity to Cupertino Senior Center and Cupertino Memorial Park, on a Priority Development Site and a Transit Priority Site. The proposed project would also include 20,000 square feet of ground floor neighborhood-serving retail, which is compatible with the surrounding land uses and required by the General Plan Commercial/Residential land use designation. Furthermore, unlike an alternate location, the proposed project is consistent with the General Plan land use designation and zoning for the project site. The project applicant does not currently own or control other potential sites for the proposed project in Cupertino, which could accommodate the proposed project or meet the objectives of the proposed mixed-use development. Nor can the proposed project applicant reasonably acquire or otherwise have access to such alternate sites (refer to Section 15126.6(f) of the CEQA Guidelines). In addition, an alternative site could cause greater operation- and construction-

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[1] California Government Code Section 15126.6(f)(2).

[2] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

related impacts. Therefore, no feasible alternative locations were evaluated for the proposed project and no further discussion is warranted.

5.4.1.2 REDUCED RESIDENTIAL DENSITY ALTERNATIVE

A reduced residential density alternative was considered and rejected because it would not be feasible under current State law because it is not required to avoid a significant environmental impact. As shown in Chapters 4.1 through 4.9, all impacts as a result of construction and operation of the proposed project would be less than significant, less than significant with mitigation, or no impact would occur. Pursuant to Government Code 65589.5(j), requiring a reduction in housing density as a condition of approval is only allowed if the proposed project has a specific adverse effect on health and safety that can only be mitigated except by lowering density. Accordingly, this alternative is infeasible, and no further discussion of this alternative is warranted.

5.4.1.3 INCREASED RESIDENTIAL DENSITY ALTERNATIVE

An increased residential density alternative was considered and rejected because it would not be feasible inasmuch as it would exceed the maximum density designated in the General Plan for the project site, which is 30 dwelling units per acre for Priority Housing Element Site A3 (The Oaks Shopping Center). This alternative would also have the potential to create greater construction and operational impacts than the proposed project. For example, a larger development could require taller buildings and a longer construction period, which could result in greater air quality, greenhouse gas emission, noise, and transportation impacts than the proposed project. Therefore, this alternative is infeasible and would not avoid significant environmental impacts, and no further discussion of this alternative is warranted.

5.4.2 ALTERNATIVES ANALYSIS

In addition to the No Project Alternative, this EIR discusses two project alternatives and compares them to the proposed project, as discussed below. As previously stated, the alternatives were selected because of their potential to reduce the significant-but-mitigable impacts of the proposed project. The three alternatives are:

- No Project Alternative
- No Retail Development Alternative
- Reduced Retail Development Alternative

The first alternative is the CEQA-required "No Project" Alternative, and assumes that no changes to the existing shopping center would occur. The No Retail Development Alternative would construct only the residential components of the proposed project at the same density as the proposed project, but would not include the retail in Residential Retail Buildings 1 and 2. The Reduced Retail Development Alternative would construct the same residential elements as the proposed project, but would reduce the retail in Residential Retail Building 1 from 17,600 square feet to 7,600 square feet, which would reduce the overall retail on the project site by 50 percent.

5.4.3 ASSUMPTIONS AND METHODOLOGY

The alternatives analysis compares the impacts of the alternatives to the proposed project. The No Project Alternative assumes no change in the existing site and no new development. The overall extent of the development on the project site for the other two alternatives is similar to the proposed project, but with less retail square footage. As described in Chapters 4.1, Air Quality, Chapter 4.2, Biological Resources, Chapter 4.3, Cultural and Tribal Cultural Resources, Chapter 4.4, Geology and Soils, and Chapter 4.7, Noise, mitigation measures would be required to reduce construction related impacts Chapter 4.9, Utilities and Service Systems, requires mitigation for operational impacts associated with wastewater generation and the capacity of the sanitary sewer system. This alternatives analysis assumes that all applicable regulations and all mitigation measures identified in this EIR for the proposed project would be implemented for the No Retail Development Alternative and the Reduced Retail Development Alternative.

The following analysis compares the potentially significant environmental impacts of the three alternatives with the project-related impacts for each of the environmental topics analyzed in detail in Chapters 4.1 through 4.9 of this Draft EIR. The impacts of each alternative are classified as greater, reduced, or similar to the level of impacts associated with the proposed project. Table 5-1 summarizes the impacts of each of the alternatives compared to the proposed project.

TABLE 5-1 COMPARISON OF IMPACTS FROM PROJECT ALTERNATIVES AND THE PROPOSED PROJECT

Topic	Proposed Project	No Project Alternative	No Retail Development Alternative	Reduced Retail Development Alternative
Air Quality	LTS/M	>	>	=
Biological Resources	LTS/M	<	=	=
Cultural and Tribal Cultural Resources	LTS/M	<	<	<
Geology and Soils	LTS/M	<	<	<
Greenhouse Gas Emissions	LTS	>	>	=
Hazards and Hazardous Materials	LTS	<	=	=
Noise	LTS/M	>	>	=
Transportation	LTS	>	>	=
Utilities and Service Systems	LTS/M	<	<	<

Notes:

LTS	Less Than Significant	<	Reduced impact in comparison to the proposed project
LTS/M	Less Than Significant with Mitigation	=	Similar impacts in comparison to the proposed project
		>	Greater impact in comparison to the proposed project

5.5 NO PROJECT ALTERNATIVE

5.5.1 DESCRIPTION

Pursuant to CEQA Guidelines Section 15126.6(e)(1), the No Project Alternative is required as part of the "reasonable range of alternatives" to allow decision makers to compare the impacts of approving the proposed project with the impacts of taking no action or not approving the proposed project. Under this alternative, the proposed project would not be constructed, and the project site would remain in its current condition. The existing development is a 71,254 square foot shopping center (The Oaks Shopping Center), which has 53,701 square feet of retail and 17,503 square feet of office space, and does not include housing. The existing site also has 201,831 square feet of paved area, which includes associated parking, sidewalks, patios, and driveways, in addition to 45,486 square feet of native and non-native landscaping, including mature trees. The site is accessible from Stevens Creek Boulevard and Mary Avenue. The No Project Alternative would not include the addition of a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, or off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp.

As discussed in Chapter 4.8, Transportation, of this Draft EIR, the existing uses on the project site generate more daily trips than the proposed project both without trip credits (2,287 existing daily trips compared to 2,174 proposed daily trips) and with trip credits (2,209 existing daily trips compared to negative or 275 fewer proposed daily trips), as well as and more VMT (existing annual VMT of 2,782,747 compared to proposed annual VMT 2,662,683).

5.5.2 IMPACT DISCUSSION

The potential environmental impacts associated with the No Project Alternative when compared to the proposed project are described below.

5.5.2.1 AIR QUALITY

The temporary construction-related air quality impacts of the proposed project are fully mitigable with implementation of Mitigation Measure AQ-2 and operational impacts are less than significant. Project-generated fugitive dust and other pollutant emissions associated with construction activities at the site would not occur under the No Project Alternative; thereby eliminating the proposed projects significant-but-mitigatable construction related air quality impacts. Like the proposed project, the No Project Alternative would not conflict or obstruct the implementation of the Bay Area Quality Management District's (BAAQMD) 2017 Clean Air Plan and would not expose sensitive receptors to substantial toxic air contaminants or CO hotspots associated with construction or operation; thus, impacts would be similar under both the proposed project and the No Project Alternative.

Under the No Project Alternative, pollutant emissions associated with vehicle trips would continue to occur. The proposed project would generate fewer daily trips before trip credits are applied (2,287 existing daily trips compared to 2,174 proposed daily trips) and with trip credits (2,209 existing daily trips compared to-275 proposed daily trips). Furthermore, the proposed residential mixed-use project would result in fewer vehicle miles traveled (VMT) (existing annual VMT of 2,782,747 compared to proposed annual VMT 2,662,683). Accordingly, air quality impacts from vehicles would be less under the proposed project. Because vehicles are considered a major source of air pollutants, the proposed project would have fewer impacts than those under existing conditions. Therefore, overall air quality impacts of the No Project Alternative would be *greater* compared to the proposed project.

5.5.2.2 BIOLOGICAL RESOURCES

The biological resources impacts of the proposed project are fully mitigable with implementation of Mitigation Measure BIO-1 and BIO-2. Under the No Project Alternative, the potential to modify habitat for any special-status species identified, such as nesting birds, would not occur. No trees would be removed under the No Project Alternative; thus, no potential for conflicts with the City's Tree Preservation regulations would occur. This would eliminate the proposed project's significant-but-mitigable adverse effects on nesting bird species protected under the Migratory Bird Treaty Act and California Fish and Game Code, as well as conflicts with local policies or ordinances protecting trees. Therefore, impacts to biological resources from the No Project Alternative would be *reduced* compared to the proposed project because no development on the project site would occur.

5.5.2.3 CULTURAL AND TRIBAL CULTURAL RESOURCES

The cultural and tribal cultural resources impacts under the proposed project are fully mitigable with implementation of Mitigation Measure CULT-1. There are no known archeological resources within the project site; therefore, impacts to known archeological resources would be the same under both the No Project Alternative and the proposed project. However, no ground-disturbing activities would occur under the No Project Alternative; therefore, this alternative would not have the potential to damage or destroy unknown archaeological (tribal or non-tribal) human remains, and tribal cultural resources. Accordingly, the potential impacts of the No Project Alternative would result in *reduced* impacts compared to the proposed project.

5.5.2.4 GEOLOGY AND SOILS

The impacts related to unknown unique paleontological resources of the proposed project are fully mitigable with implementation of Mitigation Measure GEO-1. There are no known paleontological resources on the project site and the geology and soils on the project site are common throughout the city and region and are not considered to be unique. Under the No Project Alternative, no new development would occur on the site, which reduces the potential for direct or indirect affects to an unknown paleontological resources or site, or unique geologic feature. However, no ground-disturbing activities would occur under the No Project Alternative; therefore, this alternative would not have the potential to damage or destroy unknown unique paleontological resources. Therefore, the impacts of the No Project Alternative related to geology and soils would be *reduced* compared to the proposed project.

5.5.2.5 GREENHOUSE GAS EMISSIONS

The impacts related to greenhouse gas (GHG) emissions of the proposed project are less than significant and no mitigation measures are required. Under the No Project Alternative, the existing buildings would not be demolished, and new structures would not be constructed; thus, eliminating the temporary GHG emissions from construction. No improvements required under updated building regulations described in Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR, which would result in cleaner and reduced emissions, would be made to the existing buildings. Furthermore, as described in the air quality discussion above, because the proposed project would result in fewer daily vehicular trips and VMT than those under existing conditions. Therefore, the GHG related impacts of the No Project Alternative would be ***greater*** compared to the proposed project.

5.5.2.6 HAZARDS AND HAZARDOUS MATERIALS

The impacts related to hazards and hazardous materials from construction and operation of the proposed project are less than significant without mitigation. Like the proposed project, the No Project Alternative would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, and would not emit hazardous emissions or use hazardous materials within 0.25 miles from a school. However, unlike the proposed project, the No Project Alternative would not have the potential to disturb asbestos containing materials, or lead based paints; therefore, impacts of the No Project Alternative related to hazards and hazardous materials would be ***reduced*** compared to the proposed project.

5.5.2.7 NOISE

The operational impacts related to noise from the proposed project are less than significant and the construction impacts fully mitigable with implementation of Mitigation Measure NOISE-1. Under the No Project Alternative, no short-term noise from construction would occur; however, like the existing conditions, noise from project operation would continue under both scenarios. This alternative would generate more vehicle trips than the proposed project. Because transportation related trips are a major contributor to noise, noise impacts of the No Project alternative would be ***greater*** compared to the proposed project.

5.5.2.8 TRANSPORTATION

The transportation impacts of the proposed project are less than significant, and no mitigation measures are required. The proposed project would generate fewer daily trips before trip credits are applied (2,287 existing daily trips compared to 2,174 proposed daily trips) and with trip credits (2,209 existing daily trips compared to negative or 275 fewer proposed daily trips). Therefore, the proposed residential mixed-use project would result in fewer vehicle miles traveled (VMT) (existing annual VMT of 2,782,747 compared to proposed annual VMT 2,662,683) than the No Project Alternative. Additionally, the No Project Alternative would not include the addition of a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, or off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp pursuant to the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. Accordingly, transportation impacts of the No Project Alternative would be ***greater*** compared to the proposed project.

5.5.2.9 UTILITIES AND SERVICE SYSTEMS

The utilities and service systems impacts of the proposed project are fully mitigable with implementation of Mitigation Measure UTIL-1. Based on the capacity of the sanitary sewer system, any new development may result in a determination by the wastewater treatment provider, that it does not have capacity to serve the project's projected demand in addition to the provider's existing commitment. Under the No Project Alternative, the site would continue to operate as is and no new construction would occur; therefore, there would not be an increase in wastewater generation on the project site (21,376 gallons per day (gpd) for the existing uses) compared to a net increase of 16,810 gpd (for the proposed project). Accordingly, overall impacts to utilities and service systems with regard to the capacity of the wastewater treatment system for the No Project Alternative would be ***reduced*** compared to the proposed project.

5.5.3 ABILITY OF THE NO PROJECT ALTERNATIVE TO ACCOMPLISH THE PROJECT OBJECTIVES

Under the No Project Alternative, the proposed project would not be constructed and therefore, this alternative would not accomplish any of the project objectives.

5.6 NO RETAIL DEVELOPMENT ALTERNATIVE

5.6.1 DESCRIPTION

Under the No Retail Development Alternative, the 20,000 square feet of neighborhood-serving retail in Residential-Retail Building 1 and Residential-Retail Building 2 would not be developed. The project site would be developed with the 242 residential units, consisting of three rowhouse buildings (19 units), 13 townhouse buildings (69 units), Residential Building 1 (115 units), Residential Building 2 (39 senior housing units). The building footprint of this alternative would be the same as the proposed project. The subterranean parking level would not be constructed. Rather, parking would be located on the ground floor because there would be no retail component in Residential Building 1. Residential Building 1 would still include a fitness center, lounge, and outdoor terrace for resident use only, and Residential Building 2 would also still include a common room for use by residents only. The No Retail Alternative would include the same private open space areas but increase the common open space area to 61,601 square feet, as there would not be common retail outdoor space. The No Retail Development Alternative would include a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, and off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp consistent with the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp.

While no quantitative trip generation was prepared for this alternative analysis, it is assumed that trip generation would be greater under this alternative because no neighborhood serving retail would be provided at the site and additional trips would be generated for this purpose.

5.6.2 IMPACT DISCUSSION

The potential environmental impacts associated with the No Retail Development Alternative are described below and are compared to the proposed project.

5.6.2.1 AIR QUALITY

The temporary construction-related air quality impacts of the proposed project are fully mitigable with implementation of Mitigation Measure AQ-2 and operational impacts are less than significant. Project-generated fugitive dust and other pollutant emissions associated with construction activities at the site would be slightly less under the No Retail Development Alternative due to no retail development in Residential Buildings 1 and 2 and no subterranean parking, creating a slightly reduced significant-but-mitigable construction related air quality impacts. Like the proposed project, the No Retail Development Alternative would not conflict or obstruct the implementation of the BAAQMD's 2017 *Clean Air Plan* and would not expose sensitive receptors to substantial toxic air contaminants or CO hotspots associated with construction or operation; thus, impacts would be similar under the proposed project and the No Retail Development Alternative. Under the No Retail Development, pollutant emissions associated with vehicle trips would increase due to the absence of neighborhood-serving retail uses on-site and within walking distance of the residential units. Therefore, impacts would increase under the No Retail Development Alternative as a result of added vehicle trips. Like the No Project Alternative, because automobile use is a major source of air pollution, the overall air quality impacts of the No Retail Development Alternative would be ***greater*** compared to the proposed project.

5.6.2.2 BIOLOGICAL RESOURCES

The biological resources impacts of the proposed project are fully mitigable with implementation of Mitigation Measures BIO-1 and BIO-2. The No Retail Development Alternative would result in similar development on the project site as the proposed project; therefore, the relationship to natural resources on the project site as described in Chapter 4.2, Biological Resources, of this Draft EIR would be similar under both this alternative and the proposed project.

As described in Chapter 4.3, an Arborist Report was prepared for the proposed project and is included in Appendix D, Arborist Report & Tree Removal Plan, of this Draft EIR. Of the 83 trees surveyed, the Arborist Report identified 74 trees, including 14 protected trees, that would be directly impacted by development and would require removal. Under this alternative, the number of trees protected by the City's Tree Protection Ordinance that would be impacted would be the same as the number of trees affected by the proposed project.

The mitigation measures listed above, as well as compliance with the City's existing ordinances including City's Tree Preservation Ordinance, would apply under this alternative. Therefore, the potential impacts to nesting birds and potential habitat for special-status birds that may be present on-site during construction related activities and removal of trees protected of the City's Tree Preservation Ordinance would be similar. Impacts to biological resources from the No Retail Development Alternative would be essentially *similar* compared to the proposed project.

5.6.2.3 CULTURAL AND TRIBAL CULTURAL RESOURCES

The cultural and tribal cultural resources impacts of the proposed project are fully mitigable with implementation of Mitigation Measure CULT-1. Development under the No Retail Development Alternative would have the same building envelope as the proposed project, but would not have retail components as part of Residential Buildings 1 and 2, and no excavation would be required for the subterranean parking level. The same mitigation measures that apply to the proposed project would apply to this alternative, as would State regulations to protect buried human remains and cultural and tribal cultural. However, the lack of deep excavation for this alternative would reduce the likelihood of unearthing unknown unique archeological resources. Accordingly, the potential impacts of the No Retail Development Alternative would result in *reduced* compared to the proposed project.

5.6.2.4 GEOLOGY AND SOILS

The impacts related to unknown unique paleontological resources of the proposed project are fully mitigable with implementation of Mitigation Measure GEO-1. There are no known paleontological resources on the project site and the geology and soils on the project site are common throughout the city and region, and are not considered to be unique. Under the No Retail Development Alternative, buildings would be constructed within the same development footprint as the proposed project, but the lack of excavation would reduce the likelihood of unearthing an unknown unique paleontological resource. Therefore, the impacts of the No Retail Alternative related to geology and soils would have *reduced* impacts compared to the proposed project.

5.6.2.5 GREENHOUSE GAS EMISSIONS

The impacts related to GHG emissions of the proposed project are less than significant and no mitigation measures are required. Under the No Retail Development Alternative, the existing buildings would be demolished, but the new structures would be smaller. However, future and surrounding residents would not have access to neighborhood-serving commercial uses on-site; therefore, this alternative would increase daily trips and VMT, consequently increasing impacts to GHG emissions compared to the proposed project. Accordingly, the GHG related impacts of the No Retail Development Alternative would result be *greater* compared to the proposed project.

5.6.2.6 HAZARDS AND HAZARDOUS MATERIALS

The impacts related to hazards and hazardous materials from construction and operation of the proposed project are less than significant without mitigation. Like the proposed project, the No Retail Development Alternative would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, and would not emit hazardous emissions or use hazardous materials within one-quarter mile from a school. Development under both scenarios would be required to comply with State, federal, and local laws regulating the transport, use, and disposal of hazardous materials. Therefore, impacts of the No Retail Alternative related to hazards and hazardous materials would be *similar* to the proposed project.

5.6.2.7 NOISE

The operational impacts related to noise from the proposed project are less than significant and the construction impacts fully mitigable with implementation of Mitigation Measure NOISE-1. Under the No Retail Development Alternative, the short-term increase in ambient noise levels from construction would be less than that of the proposed project due to reduced development and a shorter construction period. This alternative would not have a subterranean parking garage. As discussed in Chapter 4.7, Noise, parking lot noise would be reduced compared to the noise from surface parking when parking is located in a subterranean parking structure. Regardless, because no noise from retail parking would occur, parking noise from retail users would be less when compared to the proposed project. However, even with less parking lot noise, this alternative would still generate more vehicle trips than the proposed project since future residents and surrounding residents would not have access to neighborhood-serving retail within walking distance. Because transportation related trips are a major contributor to noise, noise impacts of the No Retail Alternative would be ***greater*** compared to the proposed project.

5.6.2.8 TRANSPORTATION

The transportation impacts of the proposed project are less than significant, and no mitigation measures are required. Similar to the proposed project, the No Retail Development Alternative would not conflict with the Cupertino General Plan or Santa Clara Valley Transportation Authority. However, under the No Retail Development Alternative, daily vehicle trips and vehicle miles traveled may increase due to the absence of a neighborhood serving retail use on the project site. Similar to the proposed project, the No Retail Development Alternative would install a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, and off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp consistent with the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. Accordingly, transportation impacts of the No Retail Development Alternative would be ***greater*** compared to the proposed project.

5.6.2.9 UTILITIES AND SERVICE SYSTEMS

The utilities and service systems impacts of the proposed project are fully mitigable with implementation of Mitigation Measure UTIL-1. Based on the capacity of the sanitary sewer system, any new development may result in a determination by the wastewater treatment provider, that it does not have capacity to serve the project's projected demand in addition to the provider's existing commitment. Under the No Retail Development Alternative, utility demand from new development on the project site would be similar to the proposed project, albeit slightly reduced because of the absence of retail space; therefore, overall impacts to utilities and service systems with regard to the capacity of the wastewater treatment system for the No Retail Development Alternative would be slightly ***reduced*** compared to the proposed project.

5.6.3 ABILITY OF THE NO RETAIL DEVELOPMENT ALTERNATIVE TO ACCOMPLISH THE PROJECT OBJECTIVES

Development proposed under the No Retail Development Alternative would meet most of the project objectives, including redeveloping an existing site with housing, helping the City to meet RHNA allocations for 2014-2022, providing senior housing in close proximity to the Cupertino Senior Center, creating a prominent gateway development at the entry to Cupertino's Heart of the City, and helping the City to achieve its affordable housing goals through the inclusion of senior housing units. However, the No Retail Development Alternative would not meet the project objectives associated with a mixed-use development. This alternative would not redevelop the project site with desirable amenities in proximity to housing, enhance the vibrancy of Cupertino's Heart of the City as a key mixed-use corridor by providing a pedestrian-friendly community that includes neighborhood retail, create a mixed-use development that places residential and commercial uses in close proximity to each other and transit options, or place affordable senior housing in a mixed-use development project. This alternative only meets three of the seven project objectives.

5.7 REDUCED RETAIL DEVELOPMENT ALTERNATIVE

5.7.1 DESCRIPTION

Under the Reduced Retail Development Alternative, the retail component would be reduced by 50 percent, or to 10,000 square feet. Residential-Retail Building 1 would have 7,600 square feet of retail space and Residential-Retail Building 2 would have 2,400 square feet of retail space, similar to the proposed project. The project site would be developed with the 242 residential units, consisting of three rowhouse buildings (19 units), 13 townhouse buildings (69 units), Residential-Retail Building 1 (115 units), Residential-Retail Building 2 (39 senior housing units). The development footprint would be the same as the proposed project, but with a 10,000 square foot reduction in retail space in Residential-Retail Building 1 and slightly smaller building size. Residential Building 1 would still include a fitness center, lounge, and outdoor terrace for resident use only, and Residential Building 2 would also still include a common room for use by residents only. No subterranean parking would be constructed, because the reduced parking needs could be accommodated on the first floor. The Reduced Retail Alternative would include the same private and common open space areas and landscaping. The Reduced Retail Development Alternative would include a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, and off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp consistent with the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp.

While no quantitative trip generation was prepared for this alternative analysis, it is assumed that trip generation would be similar to the proposed project because some neighborhood serving retail would be provided at the site.

5.7.2 IMPACT DISCUSSION

The potential environmental impacts associated with the Reduced Retail Development Alternative are described below and are compared to the proposed project.

5.7.2.1 AIR QUALITY

The temporary construction-related air quality impacts of the proposed project are fully mitigable with implementation of Mitigation Measure AQ-2 and operational impacts are less than significant. Project-generated fugitive dust and other pollutant emissions associated with construction activities at the site would be slightly less under the Reduced Retail Development Alternative due to the 50 percent reduction in retail development in Residential Buildings 1 and 2 and no subterranean parking, creating a slightly reduced significant-but-mitigable construction related air quality impacts. Like the proposed project, the Reduced Retail Development Alternative would not conflict or obstruct the implementation of the BAAQMD's 2017 *Clean Air Plan* and would not expose sensitive receptors to substantial toxic air contaminants or CO hotspots associated with construction or operation; thus, impacts would be similar under both the proposed project and the Reduced Retail Development Alternative. Under the Reduced Retail Development Alternative, pollutant emissions associated with vehicle trips would be only slightly greater, due to the 50 percent reduced neighborhood-serving retail uses on-site and within walking distance of the residential units. Therefore, impacts would be ***similar*** under the Reduced Retail Development Alternative when compared to the proposed project.

5.7.2.2 BIOLOGICAL RESOURCES

The biological resources impacts of the proposed project are fully mitigable with implementation of Mitigation Measures BIO-1 and BIO-2. The Reduced Retail Development Alternative would result in similar development on the project site as the proposed project; therefore, and the relationship to natural resources on the project site as described in Chapter 4.2, Biological Resources, or this Draft EIR would be similar under both this alternative and the proposed project.

As described in Chapter 4.3, an Arborist Report was prepared for the proposed project and is included in Appendix D, Arborist Report & Tree Removal Plan, of this Draft EIR. Of the 83 trees surveyed, the Arborist Report identified 74 trees, including 14 protected trees, that would be directly impacted by development and would require removal. Under this alternative, the number of trees protected by the City's Tree Protection Ordinance that would be impacted would be the same as the number of trees affected by the proposed project.

The mitigation measures listed above, as well as compliance with the City's existing ordinances, including City's Tree Preservation Ordinance, would apply under this alternative. Therefore, the potential impacts to nesting birds and potential habitat for special-status birds that may be present on-site during construction related activities and removal of trees protected of the City's Tree Preservation Ordinance would be similar. Impacts to biological resources from the Reduced Retail Development Alternative would essentially be the ***same as*** the proposed project.

5.7.2.3 CULTURAL AND TRIBAL CULTURAL RESOURCES

The cultural resource impacts of the proposed project are fully mitigable with the implementation of Mitigation Measure CULT-1. Development under the Reduced Retail Development Alternative would have the same building envelope as the proposed project, but would have 50 percent less retail square footage as part of Residential Buildings 1 and 2, and no excavation would be required for the subterranean parking level. The same mitigation measures apply to the proposed project would apply to this alternative, as would State regulations to protect buried human remains and cultural and tribal cultural. However, the lack of deep excavation for this alternative would reduce the likelihood of unearthing unknown unique archeological resources. Accordingly, the potential impacts of the Reduced Retail Development Alternative would result in ***reduced*** impacts compared to the proposed project.

5.7.2.4 GEOLOGY AND SOILS

The impacts related to unknown unique paleontological resources of the proposed project are fully mitigable with implementation of Mitigation Measure GEO-1. There are no known unique paleontological resources on the project site and the geology and soils on the project site are common throughout the city and region and are not considered to be unique. Under the Reduced Retail Development Alternative, buildings would be constructed within the same development footprint as the proposed project, but the lack of excavation would reduce the likelihood of unearthing an unknown paleontological resource. Therefore, the impacts of the Reduced Retail Alternative related to geology and soils would have ***reduced*** impacts compared to the proposed project.

5.7.2.5 GREENHOUSE GAS EMISSIONS

The impacts related to GHG emissions of the proposed project are less than significant and no mitigation measures are required. Under the Reduced Retail Development Alternative, the existing buildings would be demolished, but the new structures would be smaller. The 50 percent reduction in neighborhood-serving commercial uses on-site would slightly increase trips, but the resulting daily vehicle trips and VMT would be comparable to the proposed project, and therefore would result in a slight increase of GHG emissions compared to the proposed project. However, because the project would still offer mixed-use features, it is assumed the GHG related impacts of the Reduced Retail Development Alternative would be ***similar*** compared to the proposed project.

5.7.2.6 HAZARDS AND HAZARDOUS MATERIALS

The impacts related to hazards and hazardous materials from construction and operation of the proposed project are less than significant without mitigation. Like the proposed project, the Reduced Retail Development Alternative would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, and would not emit hazardous emissions or use hazardous materials within 0.25 miles of a school. Development under both scenarios would be required to comply with federal, State, and local laws regulating the transport, use, and disposal of hazardous materials. Therefore, impacts of the Reduced Retail Development Alternative related to hazards and hazardous materials would be ***similar*** *to the* proposed project.

5.7.2.7 NOISE

The operational impacts related to noise from the proposed project are less than significant and the construction impacts are fully mitigable with implementation of Mitigation Measure NOISE-1. Under the Reduced Retail Development Alternative, the short-term increase in ambient noise levels from construction would be less than that of the proposed project due to reduced development and a shorter construction period. This alternative would not have a subterranean parking garage. As discussed in Chapter 4.7, Noise, parking lot noise would be reduced compared to the noise from surface parking when parking is located in a subterranean parking structure. Because this alternative still has some retail, some noise from retail parking would occur; however, parking noise from fewer retail users would be less when compared to the proposed project. Under this alternative, future residents and surrounding residents would still be in walking distance of neighborhood-serving retail and vehicular trips would be similar to the proposed project. Therefore, noise impacts of the Reduced Retail Alternative would be ***similar*** compared to the proposed project.

5.7.2.8 TRANSPORTATION

The transportation impacts of the proposed project are less than significant, and no mitigation measures are required. Similar to the proposed project, the Reduced Retail Development Alternative would not conflict with the Cupertino General Plan or Santa Clara Valley Transportation Authority. However, under the Reduced Retail Development Alternative, daily vehicle trips and vehicle miles traveled may increase due to the 50 percent reduction in the neighborhood-serving retail use on the project site. Because the site would still support mixed-use development, it is assumed that daily vehicle trips would be similar to the proposed project. Additionally, the Reduced Retail Development Alternative would install a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, and off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp consistent with the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. Accordingly, transportation impacts of the Reduced Retail Development Alternative would be ***similar*** compared to the proposed project.

5.7.2.9 UTILITIES AND SERVICE SYSTEMS

The utilities and service systems impacts of the proposed project are fully mitigable with implementation of Mitigation Measure UTIL-1. Based on the capacity of the sanitary sewer system, any new development may result in a determination by the wastewater treatment provider, that it does not have capacity to serve the project's projected demand in addition to the provider's existing commitment. Under the Reduced Retail Development Alternative, utility demand from new development on the project site would be similar to the proposed project, albeit slightly reduced because of the 50 percent reduction of retail space; therefore, overall impacts to utilities and service systems with regard to the capacity of the wastewater treatment system for the Reduced Retail Development Alternative would be slightly ***reduced*** compared to the proposed project.

5.7.3 ABILITY OF THE REDUCED RETAIL DEVELOPMENT ALTERNATIVE TO ACCOMPLISH THE PROJECT OBJECTIVES

Although development proposed under the Reduced Retail Development Alternative would result in slightly less development than that of the proposed project (50 percent reduction in retail space), the site would be redeveloped similar to the proposed project. Similar to the proposed project, this alternative would: redevelop an existing retail and office complex with desirable amenities and housing; help the City meet the RHNA allocation for 2014-2022; enhance the vibrancy of Cupertino's Heart of the City as a key mixed-use corridor by providing a pedestrian-friendly community that includes housing, open space and greenery, and neighborhood retail; provide senior housing in close proximity to the Cupertino Senior Citizen Center; create a prominent gateway development that incorporates quality architectural design and materials, open space, and artwork to announce entry into Cupertino's Heart of the City; create a mixed-use development that places residential and commercial uses in close proximity to each other, and close to transit options; and help the City to achieve its affordable housing goals through the inclusion of senior housing units within a residential and mixed-use development project. The Reduced Retail Development Alternative would meet all of the proposed project objectives; however, it would not provide as many community desirable amenities on the project site as the proposed project.

5.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the State CEQA Guidelines requires that an "environmentally superior" alternative, other than the no project alternative, to be identified. The environmentally superior alternative is the alternative that would result in the least environmental impacts.

As shown in Table 5-1, the Reduced Retail Development Alternative would not result in any impacts than are greater than the proposed project, and would reduce impacts related to cultural resources, geology and soils, and utilities and services systems compared to the proposed project. Impacts related to air quality, biological resources, GHG emissions, hazards and hazardous materials, noise, and transportation would be similar to the proposed project. Therefore, the Reduced Retail Development Alternative would be the environmentally superior alternative.

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6. CEQA-Required Assessment Conclusions

This chapter provides an overview of the impacts of the proposed project based on the analyses presented in Chapters 4.0 through 5.0 of this Draft EIR. The topics covered in this chapter include impacts found not to be significant, growth-inducing impacts, and significant irreversible changes to the environment. A more detailed analysis of the effects that the proposed project would have on the environment, and proposed mitigation measures to minimize significant impacts, are provided in Chapters 4.1 through 4.9.

6.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

CEQA Guidelines Section 15128 allows environmental issues for which there is no likelihood of a significant impact to be briefly discussed and not analyzed further in the EIR. An Initial Study was prepared for the proposed project (see Appendix A, Initial Study, of this Draft EIR). Based on the analysis contained in the Initial Study and based on comments received, as well as the existing conditions on the project site and surrounding area it was determined that development of the proposed project would not result in significant environmental impacts for the following environmental issues:

- Aesthetics
- Agricultural and Forestry Resources
- Energy
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Wildfire

In addition, based on the analysis contained in the Initial Study it was determined that development of the proposed project would not result in significant environmental impacts for some of the significance criteria in the following topic areas and therefore, impacts related to these criteria are not analyzed further in this Draft EIR. The specific criteria are listed in Table 2-1 in Chapter 2, Executive Summary, of this Draft EIR.

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Transportation
- Utilities and Service Systems

6.2 GROWTH INDUCEMENT

CEQA Guidelines Section 15126.2(d) requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth inducing factors might include the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development. This section evaluates the proposed project’s potential to induce growth. Not all aspects of growth inducement are negative; rather, negative impacts associated with growth inducement occur only where the growth associated with the proposed project would cause adverse environmental impacts.

Growth-inducing impacts can be either direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts, consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

As described in Chapter 3, Project Description, of this Draft EIR, the proposed project would result in 242 new housing units, including 39 new senior housing units, and 20,000 square feet of retail space. Implementation of the proposed project would directly induce growth by providing new residential and non-residential growth development, as described in the Project Description. The proposed project would accommodate up to 695 new residents, to the city of Cupertino, and approximately 70 new employees, which is 65 fewer employees than currently work on the project site.

The proposed project can be considered growth inducing because it generates new growth in the Oaks Shopping Center site. Development on this site would consist of infill, mixed-use redevelopment on an underutilized site that currently contains a one-story shopping center and surface parking. The infrastructure needed to serve the proposed project is largely in place, and new growth would be required to comply with the City’s General Plan, zoning regulations, and standards for public services and utilities. Indirect or secondary effects associated with this growth would not represent a new significant environmental impact which has not already been addressed in the individual resource chapters of this Draft EIR.

Growth under the proposed project would have beneficial effects as well. The proposed project would provide additional housing for people working in Cupertino and other surrounding communities, and would also provide additional local employment and shopping opportunities for existing and future residents, thereby reducing Cupertino’s contribution to regional commute traffic. State law requires the City to promote the production of housing to meet its fair share of the regional housing needs allocation made by the Association of Bay Area Governments, and the proposed project would assist the City in satisfying these requirements. Although development from the proposed project would involve construction activities that could generate some temporary employment opportunities, it is unlikely that construction workers would relocate to Cupertino to work on construction of the proposed project.

The proposed project allows for additional growth that encourages sustainable patterns of urban land uses. This growth would be consistent with the General Plan.

6.3 SIGNIFICANT AND IRREVERSIBLE CHANGES

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which a proposed Project would commit nonrenewable resources to uses that future generation would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

6.3.1 LAND USE CHANGES THAT COMMIT FUTURE GENERATIONS

As described in Chapter 3, Project Description, of this Draft EIR, the proposed project will maintain the land use pattern of the General Plan and zoning maps. The proposed project consists of demolishing the existing retail/office buildings and constructing 18 new buildings for residential and retail uses. Redevelopment of the Oaks Shopping Center would intensify the use of the site. Specifically, the Oaks Shopping Center site would be converted from an approximately 71,250-square-foot commercial building into two mixed-use, multi-family residential buildings, including senior housing and with ground floor neighborhood-serving retail, three rowhouse buildings, and 13 townhouse buildings.

Once development of the proposed project occurs, it would not be feasible to return the developed land to its existing (pre-project) condition. However, because the project site is already developed with urban uses, redevelopment under the proposed project would not represent a substantial change in land use.

6.3.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Potential environmental accidents of concern are those that would have adverse effects on the environment or public health due to the nature or quantity of material released during an accident and the receptors exposed to that release. Demolition and construction activities associated with development of the proposed project would involve some risk of environmental accidents; however, these activities would be monitored by local, State, and federal agencies, and would follow professional industry standards for safety and construction. The land uses proposed by the proposed project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident. As a result, the proposed project would not pose a substantial risk due to environmental accidents.

6.3.3 LARGE COMMITMENT OF NON-RENEWABLE RESOURCES

Consumption of nonrenewable resources includes increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. Redevelopment of the proposed project site would require water, electric, and gas service, as well as additional resources for construction. Construction and ongoing maintenance of the proposed project would irreversibly commit some materials and nonrenewable energy resources. Materials and resources used would include, but are not limited to, nonrenewable and limited resources such as oil, gasoline, sand, gravel, asphalt, and steel. These materials and energy resources would be used for infrastructure development, transportation of people and goods, and utilities to operate the project. During the operational phase of the proposed project (post-construction), energy sources including oil and gasoline would be used for lighting, heating, and cooling of residences and retail space, as well as transportation of people to and from the project site.

The proposed project would be required to comply with and implement several measures that would offset or reduce the need for nonrenewable resources. For example, the proposed project is required to comply with all applicable building and design requirements, including Title 24 relating to energy conservation. With compliance with Part 11 of Title 24, also known as CALGreen, the State's Green Building Standards Code, the proposed project is required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. The proposed project would also implement environmentally sustainable standards for demolition, construction, and operation. Further, the City does not contain any agricultural land or a mining reserve; therefore, there would be no impact with regards to those resources (see Section 6.1, Impacts Found Not to be Significant, above).

Although the construction and operation of the proposed redevelopment project would involve the use of nonrenewable resources, through the inclusion of energy-conserving project features and compliance with applicable standards and regulations, the proposed project would not represent a large commitment of nonrenewable resources.

7. Organizations and Persons Consulted

This Draft EIR was prepared by the following consultants and individuals:

Lead Agency

City of Cupertino

Benjamin Fu, Director of Community Development
Piu Ghosh, Principal Planner
Gian Martire, Senior Planner
Chad Mosley, Assistant Director of Public Works
David Stillman, Transportation Manager
Winnie Pagan, Senior Civil Engineer

Report Preparers

PlaceWorks

Terri McCracken, Associate Principal, Principal-in-Charge
Nicole Vermillion, Associate Principal, Air Quality and Greenhouse Gas Emissions
Denise Clendening, Associate Principal, Director of Site Assessment Services
John Vang, Project Scientist, Senior Engineer
Steve Bush, Senior Engineer
Fernando Sotelo, Senior Transportation Engineer
Josh Carmen, Senior Engineer, Noise, Vibration & Acoustics
Dina El Chammas, Associate Engineer
Jacqueline Protsman, Project Planner
Torina Wilson, Project Planner
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Hexagon Transportation Consultants, Inc.

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APPENDIX A:
INITIAL STUDY

The Westport Mixed-Use Project
Initial Study Checklist

INTRODUCTION

The Westport Mixed-Use Project is a "project" under the California Environmental Quality Act (CEQA). This Initial Study was prepared by PlaceWorks for the City of Cupertino (City), Community Development Department. This Initial Study was prepared pursuant to the CEQA (Public Resources Code sections 21000 et seq.), CEQA Guidelines (Title 14, section 15000 et seq. of the California Code of Regulations).

1. **Project Title:** The Westport Mixed-Use Project

2. **Lead Agency Name and Address:** City of Cupertino Community Development Department
   10300 Torre Avenue
   Cupertino, CA 95014

3. **Contact Person and Phone Number:** Gian Martire, Senior Planner, 408-777-3319

4. **Location:** 21267 Stevens Creek Boulevard
   Cupertino, CA 95014

5. **Applicant's Name and Address:** Mark Tersini, KT Urban
   21710 Stevens Creek Boulevard #200
   Cupertino, CA 95014

6. **General Plan Land Use Designations:** Commercial / Residential

7. **Zoning:** Planned Development with General Commercial and Residential P(CG/RES)

8. **Description of Project:** See pages 15 to 28 of this Initial Study.

9. **Surrounding Land Uses and Setting:** See pages 5 to 8 of this Initial Study.

10. **Other Required Approvals:** See page 27 of this Initial Study.

11. **Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?:** The City has not received any request from any Tribes in the geographic area with which they are traditionally and culturally affiliated with or otherwise to be notified about projects in Cupertino.

INCORPORATED BY REFERENCE

All documents cited in this report and used in its preparation are hereby incorporated by reference into this Initial Study. Copies of documents referenced herein are available for review at the City of Cupertino Community Development Department at 10300 Torre Avenue, Cupertino, California 95014.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors listed below would be affected by the proposed project, involving at least one impact that is a Potentially Significant Impact, as indicated by the checklist on the following pages.

- ☐ Aesthetics
- ☒ Biological Resources
- ☒ Geology & Soils
- ☐ Hydrology & Water Quality
- ☒ Noise
- ☐ Recreation
- ☒ Utilities & Service Systems
- ☐ Agriculture & Forestry Resources
- ☒ Cultural Resources
- ☒ Greenhouse Gas Emissions
- ☐ Land Use & Planning
- ☐ Population & Housing
- ☒ Transportation
- ☐ Wildfire
- ☒ Air Quality
- ☐ Energy
- ☒ Hazards & Hazardous Materials
- ☐ Mineral Resources
- ☐ Public Services
- ☒ Tribal Cultural Resources
- ☐ Mandatory Findings of Significance

Determination:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☐ I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the City. A MITIGATED NEGATIVE DECLARATION will be prepared.

☑ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Approved by: Date 11/5/19
Gian Martire, Senior Planner

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Figures

Tables

OVERVIEW AND BACKGROUND

The 8.1-acre project site is identified as a Priority Housing Element Site in the City of Cupertino General Plan (Community Vision 2015-2040) to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 to 2022 planning period and meet Cupertino's fair-share housing obligation of 1,064 units.[1] The Westport Mixed-Use Project, herein referred to as "proposed project," would include up to 242 residential units comprised of 19 rowhouse units, 69 townhouse units, 115 multi-family units, and 39 senior residential units as well as 20,000 square feet of retail space.

The City certified the Environmental Impact Report (EIR) for the General Plan Amendment, Housing Element Update, and associated Rezoning Project,[2] which included an evaluation of the project site as "Housing Element Site 18 (The Oaks Shopping Center)" with a new mixed-use development including residential uses that could have up to 235 net residential units.[3] The EIR evaluated a maximum height of 75 feet with a retail component and a permitted residential density of up to 35 dwelling units per acre and a Zoning designation change to Planned Development with General Commercial, Residential (P(CG, Res)) to allow for future mixed-use development including residential uses.

This Initial Study checklist was prepared to assess the environmental effects of the proposed project. This document includes a description of the existing environmental setting, the project description, and a discussion of physical environmental effects that may result from construction and operation of the proposed project. While no unmitigated significant impacts are anticipated from the construction and operation of the proposed project for the reasons stated in the Environmental Analysis section, to be conservative a focused EIR will be prepared for some topic areas.

LOCATION AND SETTING

REGIONAL LOCATION

Figure 1 shows the relationship of the project site to Cupertino and the greater San Francisco Bay area. The project site is located in the central portion of Cupertino, which is in Santa Clara County. Cupertino is approximately 46 miles southeast of San Francisco and is one of the cities that make up the area commonly known as the Silicon Valley. Cupertino is generally located north of the City of Saratoga, east of unincorporated Santa Clara County, south of the City of Sunnyvale, and west of the City of San José. Cupertino also shares a boundary with the City of Los Altos to the north.

Regional access to the project site is provided by Interstate 280 (I-280), State Route 85 (SR-85), Stevens Creek Boulevard, Santa Clara Valley Transportation Authority (VTA) bus service, and by Caltrain via the Sunnyvale, Lawrence, and Santa Clara Caltrain Stations. Caltrain is operated by the Peninsula Corridor Joint Powers Board.

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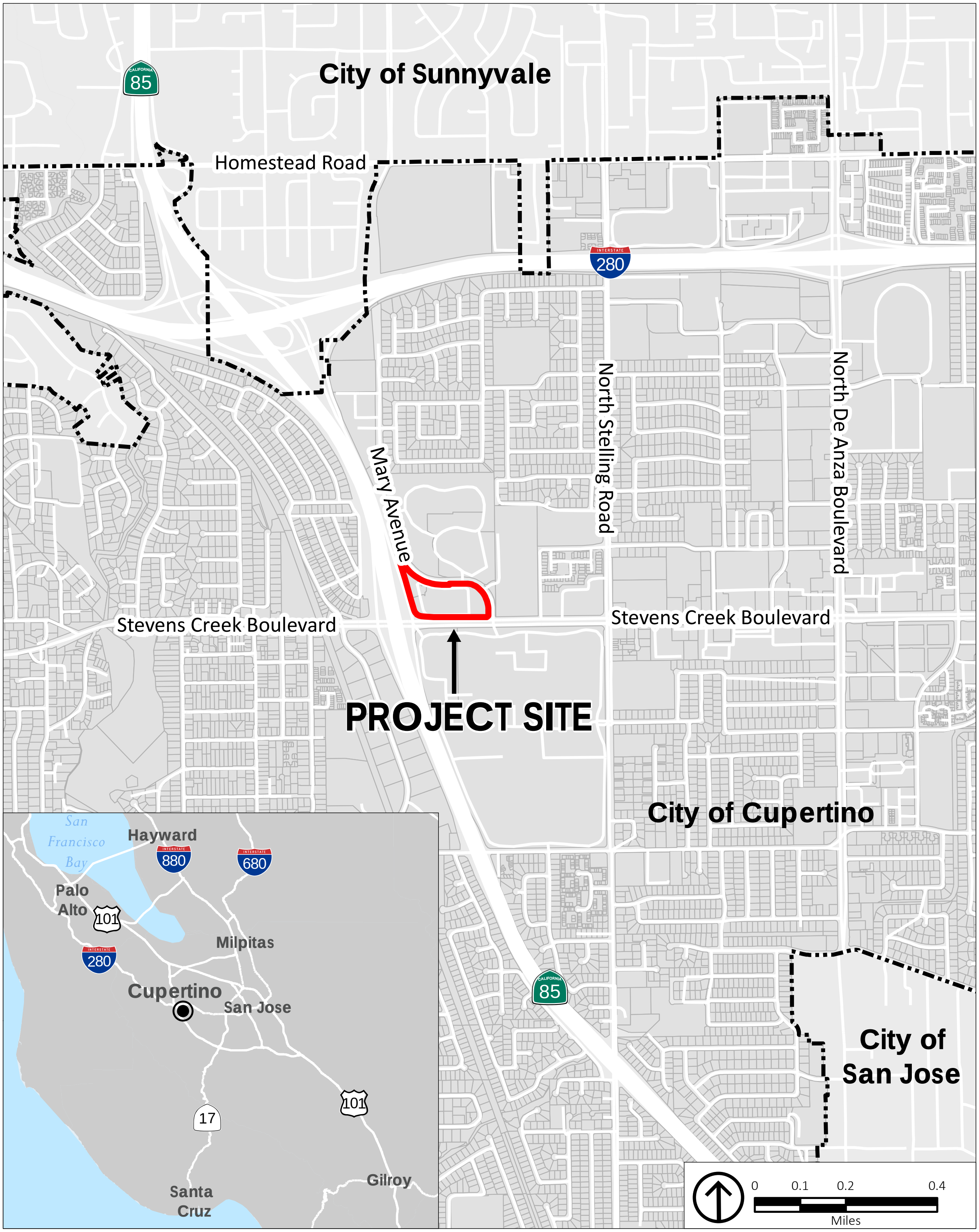
[1] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 4, Housing Element, Table HE-5: Summary of Priority Housing Element Sites to Meet the RHNA - Scenario A, page HE-18.

[2] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

[3] The project site was evaluated in the Certified EIR as Housing Element Site 18 (The Oaks Shopping Center).



Source: ESRI, 2017; PlaceWorks, 2019.

🟥 Project Site

▭ Cupertino City Limit

Figure 1
Regional and Vicinity Map

LOCAL SETTING

The 8.1-acre project site is the existing Oaks Shopping Center on Stevens Creek Boulevard. The project site is includes several street addresses; therefore, the centrally located 21267 Stevens Creek Boulevard location is used to identify the site.[4] As shown on Figure 2, the project site is bounded by Mary Avenue to the north and east, Stevens Creek Boulevard to the south, and a SR-85 on-ramp to the west of Stevens Creek Boulevard. The project site is surrounded by the Glenbrook Apartments to the north, the Cupertino Senior Center and Cupertino Memorial Park to the east, De Anza College to the south, and residential and industrial land uses to the west beyond SR-85. The project site is accessible from Stevens Creek Boulevard and Mary Avenue. The closest VTA bus stop (Line 81) is located at the Mary Avenue/Stevens Creek Boulevard intersection, approximately 200 feet east of the site, and bus stops are located at De Anza College, approximately 1,900 feet to the east at the Stevens Creek Boulevard/South Stelling Road intersection. The nearest Caltrain station to the project site is the Sunnyvale station, which is located approximately 4 miles to north. The nearest public airports are San José International Airport, approximately 7 miles to the northeast, and Palo Alto Airport, approximately 9.5 miles to the northwest. The nearest heliports are McCandless Towers Heliport, approximately 5.5 miles to the northeast, and County Medical Center Heliport, approximately 6 miles to the east. The nearest private airport is Moffett Federal Airfield, approximately 6 miles to the north. Additional setting information as it relates to each environmental topic area is provided in the Environmental Analysis section of this Initial Study.

PUBLIC SERVICE AND UTILITY PROVIDERS

The following public service providers would serve the proposed project:

- Santa Clara County Fire District for fire protection, emergency, medical, and hazardous materials
- Santa Clara County Sheriff’s Office and West Valley Patrol Division for police protect services
- Santa Clara County Library District
- Cupertino Union High School District
- City of Cupertino Department of Recreation and Community Services
- Cupertino Sanitary District for sanitary sewer services and wastewater would be treated at the San José/Santa Clara Water Pollution Control Plant
- Cupertino Water Service via San José Water Company for water services
- Silicon Valley Clean Energy and Pacific Gas & Electric (PG&E) for electricity and PG&E for natural gas

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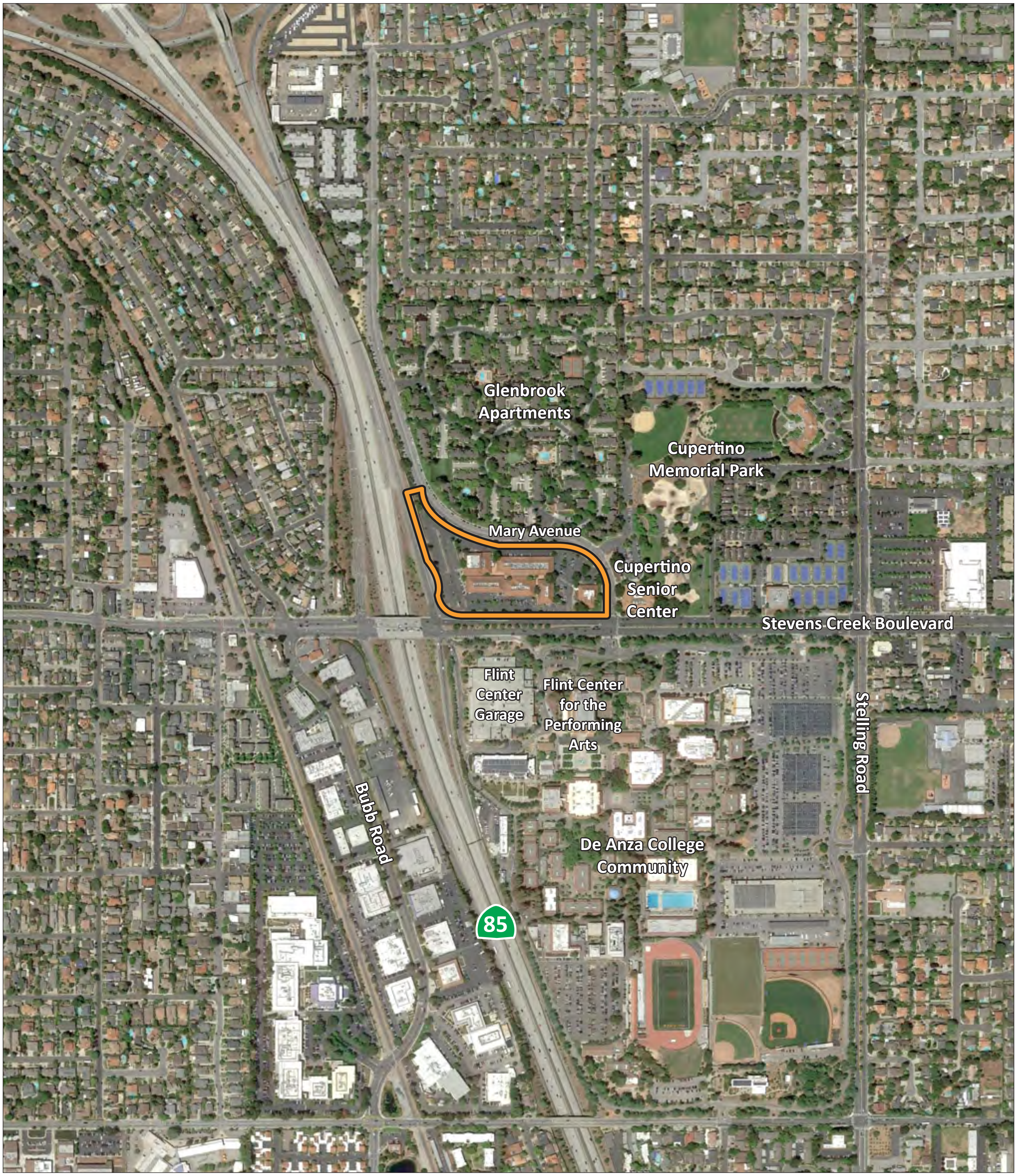
[4] Multiple street addresses on Stevens Creek Boulevard are associated with the project site, including 21255, 21265, 21267, 21269, and 21271.



Source: Google Earth Professional, 2018; PlaceWorks, 2018.

Figure 2
Aerial View of Project Site

EXISTING SITE CONDITIONS

SITE CHARACTER

The 8.1-acre project site is currently developed with a one-story shopping center (The Oaks Shopping Center) consisting of five occupied buildings with retail stores and restaurants, as shown in Figure 3, which was built between 1973 and 1976. The existing approximately 71,250 square-foot shopping center currently includes retail uses and office uses. The project site also has 201,831 square feet of paved area, which includes parking associate with the shopping center, sidewalks, patios, and driveways, and 45,486 square feet of native and non-native landscaping.

Due to the age of the buildings, the buildings have the potential to be considered historic buildings; however, they are not currently listed on the National Register of Historic Places or the list of California Historical resources.[6]

VEGETATION AND LANDCOVER

Using data from the Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG)[7] habitat mapping program, the site is classified as an "urban area". The urban area classification areas tend to have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance. The project site does not contain and is not adjacent to habitat for special-status plant or animal species.[8] According to the California Natural Diversity Database, the nearest special-status animals (White-tailed kite and Yuma myotis) are located approximately 0.5 miles to the southwest.

The California Department of Forestry and Fire Protection (CAL FIRE) has designated the project site as a Local Responsibility Area (LRA) and a non-very high fire hazard severity zone (NVHFHSZ). The project site is not near lands designated as a State Responsibility Area (SRA) by CAL FIRE. The nearest SRA is approximately 2 miles to the west of the project site.[9] The project is not located within the wildland-urban interface, which is an area of transition between wildland (unoccupied land) and land with human development (occupied land).[10]

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[6] California Office of Historic Preservation. 2019. California Historical Resources. http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=43, accessed on June 11, 2019.

[7] The CALVEG system was initiated in January 1978 by the Region 5 Ecology Group of the US Forest Service to classify California's existing vegetation communities for use in statewide resource planning. CALVEG maps use a hierarchical classification on the following categories: forest; woodland; chaparral; shrubs; and herbaceous.

[8] Special-status species are plants and animals that are legally protected under the federal Endangered Species Act/California Endangered Species Act (ESA/CESA) or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.

[9] California Department of Forestry and Fire Protection (CAL FIRE). 2008. Cupertino, Very High Fire Hazard Severity Zones in LRA. http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/santa_clara/Cupertino.pdf

[10] California Department of Forestry and Fire Protection (CAL FIRE). 2018. Wildland-Urban Interface Fire Threat. http://www.arcgis.com/home/item.html?id=d45bf08448354073a26675776f2d09cb, accessed June 11, 2019.

Source: Google Earth Professional, 2018; PlaceWorks, 2018.

▭ Project Site

Figure 3
Existing Conditions

The project site is generally flat with elevations ranging from approximately 290 feet above sea level on the northeast portion of the site to approximately 300 feet above sea level on the northwest portion of the site.[11] Site topography generally slopes downward to the east or southeast towards the intersection of Stevens Creek Boulevard and Mary Avenue. Groundwater generally flows to the east, generally following surface topography. The surficial geology is described as young, unconsolidated Quaternary Valley Floor Alluvium.[12]

The existing impervious surface totals 307,444 square feet. Stormwater from the site would drain to a network of City-maintained storm drains that collect runoff from city streets and carries it to the creeks that run through Cupertino and to the San Francisco Bay.

LAND USE AND ZONING

The project site is assigned Assessor's Parcel Numbers (APNs) 326-27-039, 326-27-040, and 326-27-041. In addition to the General Plan land use designation, the project site is located in a special planning area, a designated gateway, and a priority Housing Element site. A description of the applicable General Plan policies and permitted development in these areas and designations is provided below.

GENERAL PLAN

Planning Area

The project site is within the Heart of the City Special Area, which is a key mixed-use, commercial corridor in Cupertino. Development within this Special Area is guided by the *Heart of the City Specific* Plan (Specific Plan. The Specific Plan provides detailed development guidance for development within the Specific Plan area. The Specific Plan is split into five subareas, including the West Stevens Creek Boulevard subarea along Stevens Creek Boulevard between SR-85 and Stelling Road, which encompasses the project site. Mixed commercial and residential, with residential located behind primary uses (quasi-public/public facilities) and above the ground level is permitted in this subarea. Development in the Heart of the City Special Area/Specific Plan is envisioned to create a greater sense of place, more community identity, and a positive and memorable experience for residents, workers, and visitors of Cupertino.[13]

Gateway

The project site is the Oaks Gateway. Gateways represent entry points to the city. As shown on the Heart of the City Special Area Diagram and the General Plan Community Form Diagram, the Oaks Gateway is a neighborhood commercial center. A neighborhood center is an area intended to provide shopping and gathering spaces for local residents. Mixed-use development is allowed in the Oaks Gateway if it promotes revitalization of retail uses, creation of new gathering spaces, and parcel assembly. General Plan Policy LU-

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[11] Langan Treadwell Rollo, 2014. Preliminary Geotechnical Investigation, The Oaks 21255 Stevens Creek Boulevard Cupertino, California, January 1, 2014.

[12] City of Cupertino General Plan EIR, Chapter 4.5 Geology, Soils, Seismicity, Figure 4.5-1 Geologic Map, Cupertino, California.

[13] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 2, Planning Areas, Figure PA-1, page PA-1.

14.5 (Oaks Gateway Node) states that the Oaks Gateway is a retail and shopping node and that new residential, if allowed, should be designed on the "mixed-use village" concept.[14] The mixed-use urban village concept includes providing parcel assembly, complete site redevelopment, mixed-use village layout with streets, alleys, sidewalks, open spaces, mix of retail uses, public open spaces, and high-quality, pedestrian-oriented design.[15]

Housing Element Site

The project site is identified as Priority Housing Element Site A3 (The Oaks Shopping Center). As described in the General Plan, many of the City's Housing Element sites, including the project site, are located in major corridors to reduce traffic and environmental impacts and preserve neighborhoods.[16] The Housing Element defines the maximum height on the project site as 45 feet and the maximum density as 30 dwelling units per acre (du/ac).[17] The Housing Element also describes that for projects that comply with General Plan Housing Element Strategy HE-2.3.7 (Density Bonus Ordinance), changes to development standards or zoning code requirements may be allowed under certain conditions.[18]

Land Use Designation

The General Plan land use designation for the project site is Commercial/Residential. This land use designation allows primarily commercial uses and secondarily residential uses or a compatible combination of the two. Commercial use means retail sales, businesses, limited professional offices, and service establishments with direct contact with customers. This applies to commercial activities ranging from neighborhood convenience stores to regionally oriented specialty stores. Retail stores that would be a nuisance for adjoining neighborhoods or harmful to the community identity would be regulated by the commercial zoning ordinance and use permit procedure. Smaller commercial parcels in existing residential areas may be needed to provide local neighborhood serving retail; otherwise, they may be redeveloped at residential densities compatible with the surroundings.

ZONING ORDINANCE

The project site is zoned Planned Development with General Commercial and Residential (P(CG,RES)) on the City's Zoning Map. Pursuant to Cupertino Municipal Code (CMC) Section 19.80.030(B), all planned development districts are identified on the zoning map with the letter coding "P" followed by a specific

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[14] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-44.

[15] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-18.

[16] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-18.

[17] *Heart of the City Specific Plan* and page 15 (height), and City of Cupertino General Plan (Community Vision 2015-2040), Chapter 4, Housing Element, Table HE-5: Summary of Priority Housing Element Sites to Meet the RHNA - Scenario A, page HE-17.

[18] City of Cupertino Municipal Code, Title 19, Zoning, Chapter 19.56 Density Bonus, Sections 19.56.030, Density Bonus, and 19.56.040, Incentives or Concessions, Waives and Reduction of Parking Standards.

reference to the general type of use allowed in the particular planning development zoning district.[19] The general types of uses allowed on the project site are General Commercial and Residential.

As described in CMC Section 19.80.010, the planned development zoning district is intended to provide a means of guiding land development or redevelopment of the city that is uniquely suited for planned coordination of land uses.[20] Development in "P" zoning district provides for a greater flexibility of land use intensity and design because of accessibility, ownership patterns, topographical considerations, and community design objectives. This zoning district is intended to accomplish the following:

- Encourage variety in the development pattern of the community
- Promote a more desirable living environment
- Encourage creative approaches in land development
- Provide a means of reducing the amount of improvements required in development through better design and land planning
- Conserve natural features
- Facilitate a more aesthetic and efficient use of open spaces
- Encourage the creation of public or private common open space

Pursuant to CMC Chapter 19.60,[21] the General Commercial (CG) zoning designation is intended to regulate retail, office, and service establishments offering goods and services to the general public to assure maximum compatibility with surrounding residential areas, as well as minimize adverse traffic impacts resulting from commercial development.

PRIORITY DEVELOPMENT AREA/TRANSIT PRIORITY AREA

Plan Bay Area 2040 is the Bay Area's current Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS) that was adopted jointly by the Association of Bay Area Government's (ABAG) and Metropolitan Transportation Commission (MTC) on July 26, 2017. As part of the implementing framework for *Plan Bay Area*, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. In addition to PDAs, *Plan Bay Area* identifies Transit Priority Areas (TPAs), which are areas within one-half mile of a major transit stop (15 minute or less service level frequency) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.

An overarching goal of the regional *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve

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[19] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.80, Planned Development, Section 19.80.030, Establishment of Districts-Permitted and Conditional Uses.

[20] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.80, Planned Development, Section 19.80.010, Purpose.

[21] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.60, General Commercial (CG) Zones, Section 19.60.010, Purpose.

the per capita passenger vehicle, vehicle miles traveled (also referred to as "VMT"), and associated greenhouse gas (GHG) emissions reductions.

The project site is located in a Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas PDA. Because the project is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes, it is a designated Transit Priority Area (TPA).[22] See the Environmental Analysis section below, for more discussion on PDAs and TPAs.

OTHER REQUIREMENTS

LANDSCAPING ORDINANCE

CMC Chapter 14.15, Landscape Ordinance, implements the California Water Conservation in Landscaping Act of 2006 by establishing new water-efficient landscaping and irrigation requirements. In general, any commercial, industrial, office, multi-family residential, public and institutional building or landscape projects that involve less than 2,500 square feet of landscape area are required to submit a Prescriptive Compliance Submittal, and those that involve more than 2,500 square feet of landscape area are required to submit a Landscape Project Submittal, to the Director of Community Development for approval. Existing and established landscapes of more than 1 acre, including cemeteries, are required to submit water budget calculations and audits of established landscapes.

PROTECTED TREE ORDINANCE

CMC Chapter 14.12, Trees, establishes regulations for the planting, care, and maintenance of public trees, and provides for the continuous maintenance of the public trees, with the goal of encouraging preservation of trees. The City funds the planting and maintenance of public trees through payment of reimbursement costs as a conditions of building permit issuance.[23]

CMC Chapter 14.18, Protected Trees, provides regulations for the protection, preservation, and maintenance of protected trees as defined in the ordinance. "Protected" trees include trees of a certain species and size in all zoning districts; heritage trees in all zoning districts; any tree required to be planted or retained as part of an approved development application, building permit, tree removal permit, or code enforcement action in all zoning districts; and approved privacy protection planting in R-1 zoning districts Removal of a protected tree requires a permit from the City. [24]

ENERGY CONSERVATION

The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or

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[22] *Plan Bay Area*, Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining, https://www.planbayarea.org/pda-tpa-map, accessed on July 11, 2019.

[23] City of Cupertino Municipal Code, Title 14, Streets, Sidewalks and Landscaping, Chapter 14.12, Trees.

[24] City of Cupertino Municipal Code, Title 14, Streets, Sidewalks and Landscaping, Chapter 14.18, Protected Trees.

structure, unless otherwise indicated in the code, throughout the State of California. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation requiring new buildings to reduce water consumption by 20 percent, material conservation, and internal air contaminants. The local building permit process enforces the building efficiency standards.

CMC Chapter 16.58, Green Building Standards Code Adopted, includes the CALGreen requirements with local amendments for projects in the city. The City's Green Building Ordinance codifies green building techniques, including measures affecting water use efficiency and water conservation. CMC Sections 16.58.100 through 16.58.220 sets forth the standards for green building requirements by type of building. As shown on Table 101.10 in CMC Section 16.58.220, mixed-use project with residential and non-residential components shall comply by either: (1) meeting the applicable requirements for each use; or (2) meeting the applicable requirements for the use that comprises the majority of the project's square footage where uses are attached and/or combined in a building. For the residential component, new construction greater than nine homes is required to be Green Points Rated (GPR) certified at a minimum of 50 points, Silver in Leadership in Energy & Environmental Design (LEED), or Alternate Reference Standard pursuant to Section 101.10.2. For the non-residential component, development of less than 25,000 square feet is required to comply with the CALGreen Building Code pursuant to Chapter 5 of the California Green Building Standards Code. CMC Section 16.58.230 permits applicants to apply an alternate green building standard for a project in lieu of the minimum standards in CMC Section 16.58.220 that meet the same intent of conserving resources and reducing solid waste.

SOLID WASTE REDUCTION

Consistent with CALGreen, CMC Chapter 16.72, Recycling and Division of Construction and Demolition Waste, requires that a minimum of 65 percent of all non-hazardous construction and demolition debris must be recycled or salvaged and that all applicants have a waste management plan for on-site sorting of construction debris. In December 2017, the City adopted a Zero Waste Policy.[25] According to the Zero Waste Policy, the City will require, through the City's waste hauling franchise agreement, steadfast and ongoing efforts by the City's franchisee to maintain a minimum residential and commercial waste diversion rate of 75 percent with a goal of reaching and maintaining 80 percent by 2025.

WATER QUALITY

CMC Chapter 9.18, Storm Water Pollution Prevention and Watershed Protection provides regulations and gives legal effect to the Municipal Regional Storm Water National Pollutant Discharge Elimination System (NPDES) Permit (MRP) issued to the City. This chapter also ensures ongoing compliance with the most recent version of the City's MRP regarding municipal stormwater and urban runoff requirements. This chapter applies to all water entering the storm drain system generated on any private, public, developed, and undeveloped lands within the city. The CMC contains permit requirements for construction projects and new development or redevelopment projects to minimize the discharge of storm water runoff.

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[25] City of Cupertino, Public Works, Garbage & Recycling, https://www.cupertino.org/our-city/departments/environment-sustainability/waste, accessed June 11, 2019.

PROJECT DESCRIPTION

The proposed project would demolish the existing buildings and construct 18 buildings with 242 residential units, up to 20,000 square feet of retail space, below and at-grade parking, and landscape and hardscape areas. See Figures 4 through 9.

The proposed development is summarized in Table 1. The proposed development, population and employment projections, construction phasing, as well as the required permits and approvals are described in detail below. A complete set of conceptual site plans is included on the City's website at www.cupertino.org/westport.

TABLE 1 PROPOSED DEVELOPMENT BY LAND USE

			Square Footage			
Building Type	**Buildings**	**Units**	**Residential**	**Garage**	**Retail**	**Common Open Space**
Rowhouses	3	19	34,245	10,840		155 square feet per unit
Townhomes	13	69	139,850	39,450		
Residential-Retail Building 1	1	115	193,500	97,750	17,600	
Residential-Retail Building 2	1	39	38,800	n/a	2,400	
Total	**18**	**242**	**406,395**	**148,040**	**20,000**	**37,601**

Note: Square footages are rounded up and include residential and parking.
Source: C2K Architecture Inc. (project applicant), November 2018.

PROPOSED DEVELOPMENT

Residential

The proposed residential component consists of three rowhouse buildings (attached homes) located on the western edge of the project site, 13 townhouse buildings (attached homes) located at the center of the project site, and two mixed-use (residential and retail), including senior housing, located on the eastern and southeastern portion of the project site. See Figure 4.

The rowhouse buildings would be three stories tall (30 feet at the roofline) and have a total of 19 units. See Figure 5. The townhouse buildings would also be three stories tall (30 feet at the roofline) and have a total of 69 units. See Figure 6.

Residential-Retail Building 1 would be six stories tall (70 feet at the roofline). See Figures 7 and 8. Building 1 would have up to 115 market-rate units on floors two through six consisting of one-, two-, and three-bedroom units. Building 1 would also include a fitness center, lounge, and outdoor terrace on the second story for resident use only.

Residential-Retail Building 2 would be five stories tall (55 feet at the roofline). See Figure 9. Building 2 would have up to 39 senior housing units located on floors two through five, comprising of studio and one-bedroom units. Building 2 would also include a common room on the ground level for use by residents only.

Source: C2K Architecture Inc., November 2018.

Figure 4

Conceptual Site Plan

Source: C2K Architecture Inc., November 2018.

Figure 5
Site Sections: Rowhouses

Source: C2K Architecture Inc., November 2018.

Figure 6
Site Section: Townhomes

North

East

Source: C2K Architecture Inc., November 2018.

Figure 7

Elevations: Residential-Retail Building 1 (North, East)

1 A213 BUILDING 1 - STEVENS CREEK BLVD ELEVATION - SOUTH

South

2 A213 BUILDING 1 - WEST ELEVATION

West

Source: C2K Architecture Inc., November 2018.

Figure 8

Elevations: Residential-Retail Building 1 (South, West)

Source: C2K Architecture Inc., November 2018.

Figure 9

Elevations: Residential-Retail Building 2 (North, East, South, West)

Retail

The proposed retail component would consist of a total of 20,000 square feet and would be located on the ground level of the Residential-Retail Buildings 1 and 2. Residential-Retail Building 1 would have 17,600 square feet of retail space located at the corner of Stevens Creek Boulevard and Mary Avenue. Residential-Retail Building 2 would have 2,400 square feet of retail space on the ground level fronting Stevens Creek Boulevard. At-grade parking for these retail uses would be provided along Mary Avenue for Building 1 and along the internal street along Building 2. A one-level subterranean parking garage would be provided below Building 1. See Figure 4.

Open Space

Private open space areas would be provided for each residential unit either as a balcony or patio. The rowhouses would include private patios that range in size from 295 to 375 square feet per unit. The townhomes would include private patios that range in size from 104 to 125 square feet per unit. Building 1 would include private balconies that range in size from 60 to 132 square feet per unit. Building 2 would include private balconies that are 60 square feet per unit. Common open space areas would be provided throughout the project site including a large central green space. The project site would include up to 37,601 square feet of common open space. Common retail outdoor space totaling 2,400 square feet would be provided at Residential-Retail Building 1 and 2.

Landscaping & Stormwater Treatment

The project site includes landscaping throughout the interior and the surrounding perimeter of the project site. See Figure 10. The proposed project would retain some existing trees and would plant approximately 400 additional trees. The proposed project would result in 45,486 square feet of replaced pervious surfaces and 42,360 square feet of new pervious surfaces for a total of 87,846 square feet of pervious landscaped surfaces and 6,852 square feet of pervious paving pursuant to the City's Landscape Ordinance (CMC Chapter 14.15). The proposed landscaping would be consistent with the surrounding Northern California landscape and would include native and/or adaptive, drought resistant plant materials grouped by hydrozones (i.e., areas similar water use). The majority of plantings would be drought tolerant grasses, shrubs, and trees that, once established, would be adapted to a dry summer and intermittent rain in the winter season. Landscaping would be specifically designed around the rowhouses, townhomes, and mixed-use units to provide privacy between adjacent land uses. The proposed project would reduce the total amount of impervious surface from 307,444 square feet to 247,222 square feet which would reduce the peak flows into the storm drain system. Because the proposed project would include a total of 247,222 square feet of impervious surfaces, the proposed project would be required to include 10,268 square feet of bioretention areas (i.e., stormwater treatment areas).[26] The proposed project includes 10,320 square feet of bioretention areas, which is 52 square feet more than the required amount. The bioretention areas would be incorporated into the landscaped areas throughout the project site. See Figure 11.

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[26] Santa Clara Valley Water District Municipal Regional Stormwater NPDES Permit C.3 requires 4 percent of the proposed impervious surface be treated to control the flow of stormwater and stormwater pollutants from new development, http://www.scvurppp-w2k.com/pdfs/1516/c3_handbook_2016/SCVURPPP_C.3_Technical_Guidance_Handbook_2016_Chapters.pdf.

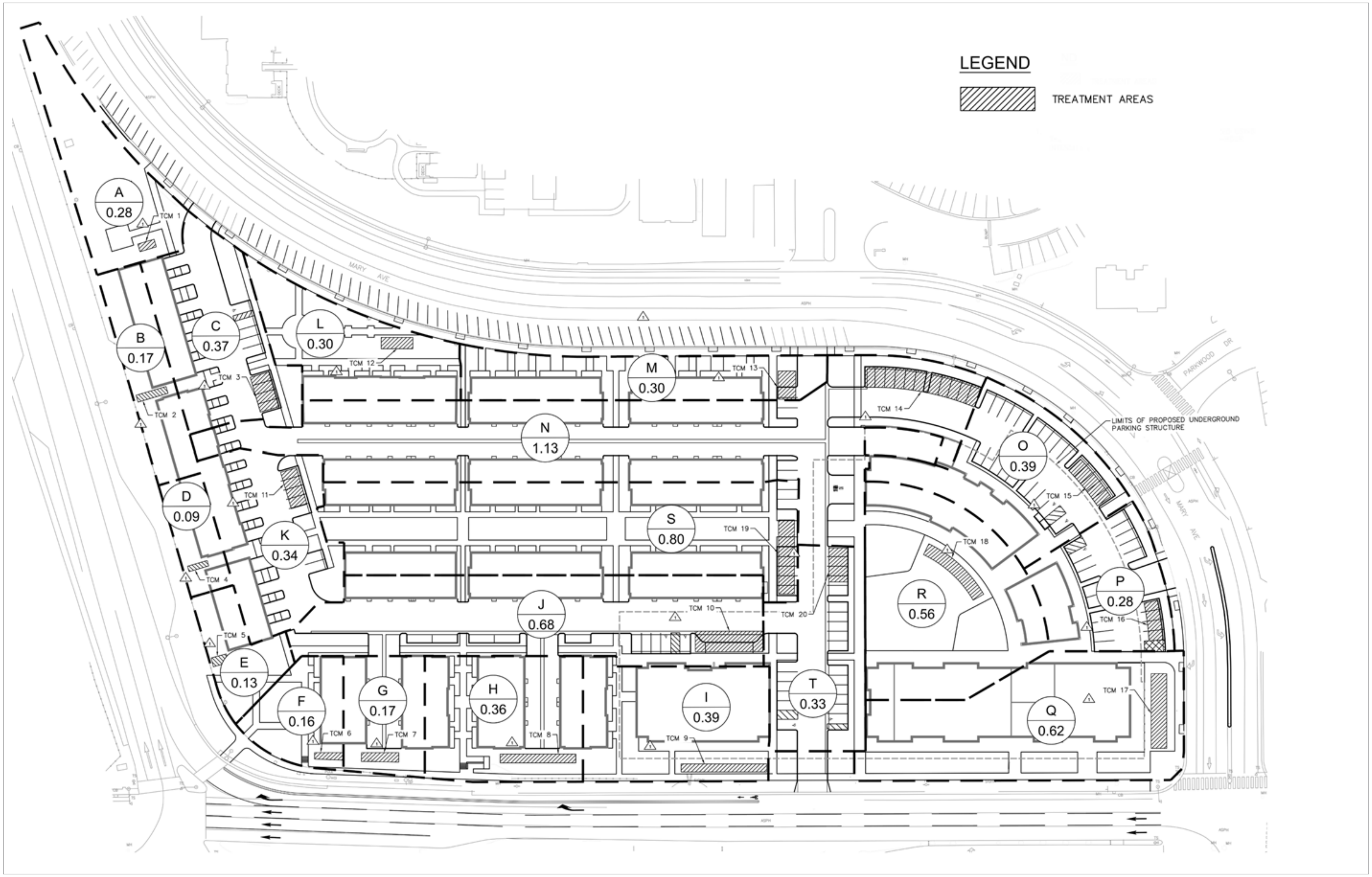
PLANTING PALETTE

	KEY	COMMON NAME	BOTANICAL NAME	LOCATION / NOTES
	TREES			
●	1	CRAPE MYRTLE	LAGERSTROEMIA X FAURIEI	RESIDENTIAL CORRIDORS
●	2	DEODAR CEDAR	CEDRUS DEODARA	NORTH, SOUTHWEST PARKS, WEST BOUNDARY
●	3	GINGKO 'PRINCETON SENTRY'	GINGKO BILOBA 'P.S.'	NORTHWEST, SOUTHWEST PARKS, SOUTHEAST RETAIL
●	4	CALIFORNIA LIVE OAK	QUERCUS AGRIFOLIA	FRONTAGE ALONG STEVENS BLVD.
●	5	'BOSQUE' CHINESE ELM	ULMUS PARVIFOLIA 'BOSQUE'	STREET TREES ALONG MARY AVE.
●	6	CHINESE PISTACHE	PISTACIA CHINENSIS	INTERIOR PARKING CORRIDOR ZONES
●	7	DATE PALM	PHOENIX CANARIENSIS	ENTRY & TERMINUS MARKERS, CENTRAL GREEN
●	8	MEXICAN FAN PALM	WASHINGTONIA ROBUSTA	PASEO AT CENTRAL RESIDENTIAL UNITS
●	9	ITALIAN CYPRESS	CUPRESSUS SEMPERVIRENS	RESIDENTIAL ALLEYWAYS
●	10	CALIFORNIA LILAC	CEANOTHUS RAY HARTMAN	FRONTAGE ALONG STEVENS CREEK
○		EXISTING TREES TO REMAIN	VARIOUS (SEE L.300)	PERIMETER TREES
○		RELOCATED TREE	QUERCUS AGRIFOLIA	RELOCATED TO VARIOUS LOCATIONS AT WEST SIDE
	SHRUBS AND GROUNDCOVERS			
🟩	A	LAWN	BOUTELOUA SPP.	CENTRAL PASEO, CENTRAL GREEN, CORNER PARKS
🟩	B	STORM WATER PLANTINGS	VARIOUS SEDGES, GRASSES, NATIVE PERENNIALS & SHRUBS	THROUGHOUT, SEE CIVIL PLANS
🟩	C	NATIVE / ORNAMENTAL GRASSES	NATIVE AND LOW WATER USE	RESIDENTIAL FRONTS, PERIMETER, THROUGHOUT
🟨	D	NATIVE GROUNDCOVER MIXES	NATIVE GROUNDCOVERS & WILDFLOWERS	WEST BOUNDARY, STEVENS CREEK FRONTAGE
🟧	E	ACCENT PLANTINGS (NATIVE MIXES)	NATIVE AND LOW WATER USE	PLANTERS THROUGHOUT, CENTRAL GREEN

Source: C2K Architecture Inc., November 2018.

Figure 10

Landscape Plan



Source: C2K Architecture Inc., February 2019.

0 160
Scale (Feet)

Figure 11
Stormwater Treatment Plan

Lighting and Glare

The source, intensity, and type of exterior lighting for the project site would generally be provided for the purpose of orienting site users and for safety needs. All on-site lighting would be low-level illumination and shielded to reduce light spill or glare. There would be no up-lighting or spotlights on the project site and non-emergency lighting would be turned off at night. In landscaped and paved areas, light sources would be concealed and not visible from a public viewpoint, and landscaping would not funnel open space toward the building façade. All exterior surface and above-ground mounted fixtures would be complementary to the architectural theme. The proposed project would limit large areas of transparent or reflective glass by including solid wall buildings with recessed windows, mullions or muntins[27]to divide overall window size, non-reflective glass railings, fritted glass and opaque panels, arcades, and overhanging roods that shield the windows. The proposed project would avoid transparent glass skyways, walkways, and entryways, as well as free-standing glass walls and transparent building corners. The proposed landscaping would also reduce reflections and view of foliage through glass.

Access and Circulation

The proposed project would have one access point from Stevens Creek Boulevard and three access points from Mary Avenue. See Figure 4. The below-grade parking at Residential-Retail Building 1 would be accessed from the central access point on Mary Avenue. A series of internal roadways, sidewalks, and bike lanes would provide access to the proposed buildings. In addition to the on-site internal sidewalks, the proposed project would also include off-site sidewalk modifications along Stevens Creek Boulevard and Mary Avenue.

The proposed project would include the following on- and off-site improvements that are consistent with the recommendations in the 2016 *Bicycle Transportation Plan* (2016 Bike Plan):[29]

- **Class I Bike Path.** The proposed project would install an on-site Class I bike path on the western portion of the project site that would connect to Stevens Creek Boulevard to the south and Mary Avenue to the north.
- **Class IV Separated Bikeway.** The proposed project would upgrade the bike lane on Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp from an Enhanced bike lane to a Class IV separated bikeway. The proposed project would reconfigure the existing westbound right turn movement from Stevens Creek Boulevard onto the northbound SR-85 on ramp to accommodate the proposed Class IV separated bikeway. The proposed project would include a signal control for the westbound right turn movement, the cars would have a continuous green right-turn arrow until a cyclist or pedestrian arrives and activates the proposed pedestrian or bike crossing signal, at which time a red right-turn arrow would stop the cars. This pedestrian/bicycle signal call could only occur on the east-west signal phasing plan of the intersection when there are no other conflicting movements with the pedestrian and/or bicycle phase. This reconfiguration would convert the existing westbound

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[27] A *mullion* is a vertical element that forms a division between units of a window or screen or is used decoratively. When dividing adjacent window units is its primary purpose, it is a rigid support to the glazing of the window. *Muntins* on the other hand divide, reinforce and join glass within a single window or sash frame. These are the small vertical and horizontal bars that change large pieces of glass into small “divided lites.”

[29] City of Cupertino 2016 Bicycle Transportation Plan, Figure 3-7, Bikeway Projects, page 3-8.

"free" right turn lane to a signal controlled right turn movement to allow for an exclusive, protected phase for pedestrians and cyclists to cross the on-ramp leg.

- **Bridge.** The proposed project would include public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue.

The proposed project would include a total of 117 bicycle parking facilities,[30] consisting of five Class 1 facilities for retail uses, 18 Class 2 facilities for retail uses, 78 Class 1 facilities for residential uses, and 16 Class 2 facilities for residential uses. Bike facilities would be located adjacent to Buildings 1 and 2, in addition to within the proposed buildings.

The proposed project would also install a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. The precise design-level details would need to be coordinated with VTA and City of Cupertino Public Works Department. For this EIR, it is assumed the bus stop would include a concrete bus pad and bus shelter.

POPULATION AND EMPLOYEE ESTIMATES

Based on an average household size of 2.87 persons,[31] the proposed project would generate 695 residents.[32] Applying the generation rate of one job for every 450 square feet of commercial uses, the proposed project would generate 45 employees[33] The proposed project would also include a full service staff of 25 employees including leasing agents, security staff, and maintenance personnel that would be present on site to manage the property for a total of 70 employees.

There are no existing residential units on site. However, the project site has approximately 71,250 square feet of existing retail uses. Applying the generation rates applied in the General Plan EIR, the existing uses generate 135 employees; therefore, the proposed project would have a net decrease of 65 employees.[34] It is anticipated that future residents and employees would be drawn largely from Cupertino and other communities in the San Francisco Bay Area.

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[30] Class 1 bicycle parking spaces include bicycle lockers or secure rooms and Class 2 bicycle parking spaces are publicly accessible bicycle racks.

[31] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 projections of the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino.

[32] 242 new units multiplied by 2.87 persons per unit equals 695 new residents.

[33] 20,000 square feet of retail divided by 450 square feet per employee equals 45 employees.

[34] 85 percent occupancy of approximately 71,250 square feet (about 60,563 square feet) of retail divided by 450 square feet per employee equals 135 employees. 135 existing employees – 70 proposed employees = 65 fewer employees.

CONSTRUCTION, DEMOLITION, AND SITE PREPARATION

Development of the proposed project would occur in two phases over a 16-month period and is anticipated to be completed by the year 2023. See Figure 12. The proposed project would involve demolition of existing structures and parking stalls (approximately 71,250 square feet), and the removal of the existing landscaping on site, with the exception of four oak trees, which will be relocated on the project site as shown in Figure 10. Site preparation would include export of 69,000 cubic yards of cut. No soil import would occur. Demolition debris, including soil from excavation, would be off hauled for disposal at the Zanker Materials Recovery and Landfill in San José, which is approximately 15 miles from the project site.

Phase 1 would include the construction of Residential-Retail Buildings 1 and 2, as well as the underground parking garage on the eastern portion of the site. Phase 2 would include the construction of the rowhouses and townhouses on the western portion of the project site.

REQUIRED PERMITS AND APPROVALS

Following approval of the CEQA-required environmental review and the approval of the proposed project by the Planning Commission, the following discretionary permits and approvals from the City would be required for the proposed project:

- Development Permit
- Architectural and Site Approval Permit
- Use Permit
- Subdivision Map Permit
- Heart of the City Exception
- Tree Removal Permit

As part of the Development Permit, the proposed project is requesting a Density Bonus of 5 units pursuant to State Law as incorporated into the City's Housing Element[36] and CMC.[37]. Specifically, the requests include waivers of development standards for height, slope setbacks, and the location of senior housing that would have the effect of physically precluding the development of the proposed project at the density proposed. In addition, permits for demolition, grading and building, and the certificate of occupancy would be required from the City.

The project may also require encroachment permits from Caltrans.

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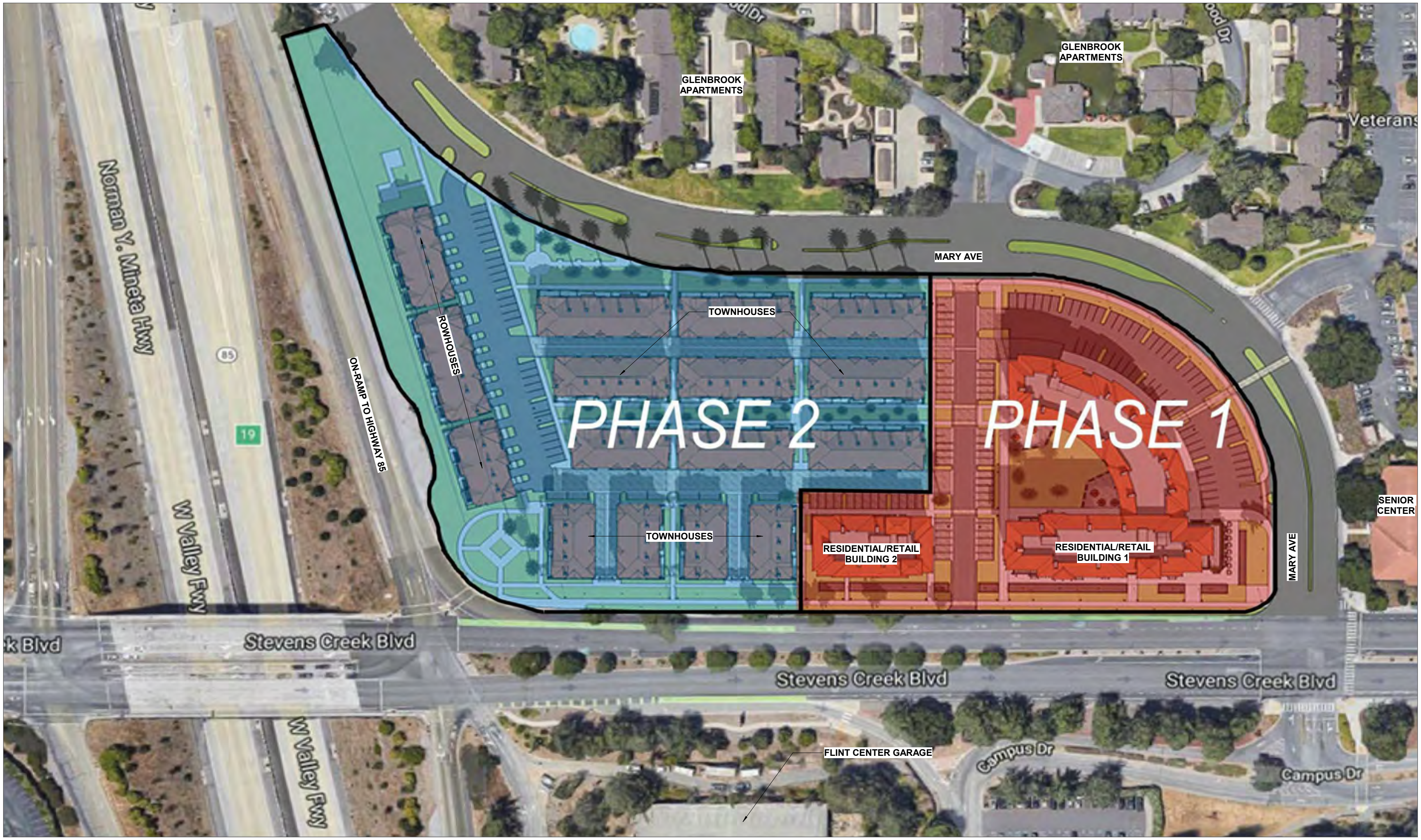
[36] City of Cupertino Housing Element Strategy HE-2.3.7 (Density Bonus Ordinance), page H-29.

[37] City of Cupertino Municipal Code, Title 19, Zoning, Chapter 19.56 Density Bonus, Sections 19.56.030, Density Bonus, and 19.56.040, Incentives or Concessions, Waivers and Reduction of Parking Standards.



Source: C2K Architecture Inc., November 2018.

0 200
Scale (Feet)

Figure 12
Construction Phasing Plan

ENVIRONMENTAL ANALYSIS

Consistent with the analysis presented in the General Plan EIR, and due to the proposed project's location in an urbanized city setting, the project would not have a significant effect on Agriculture and Forestry Resources or on Mineral Resources. Therefore, these topics are not discussed further in this Initial Study and will not be discussed in the EIR. Maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency categorize land within Cupertino as Urban and Built-Up Land.[38] In addition, according to 2006 mapping data from the California Department of Forestry and Fire Protection, the city does not contain any woodland or forestland cover.[39] In addition, the city does not contain land zoned for farmland or timberland production.[40] Consequently, there would be no impacts with regard to agriculture and forestry resources. While the city does have mineral resource zones (MRZ) MRZ-2, which are areas where adequate information indicates that significant mineral deposits are present, and MRZ-3, which are areas containing mineral deposits for which the significance of cannot be evaluated based on available data, the project site is not within an MRZ area; thus, it is not identified for protection or conservation with regard to mineral resources.[41]

Senate Bill (SB) 743 became effective on January 1, 2014 and, among other provisions, SB 743 amended CEQA by adding Public Resources Code Section 21099 regarding analysis of aesthetics, parking, and traffic impacts for urban infill projects. The following is a discussion of how aesthetics and parking are treated in SB 743.

CEQA section 21099(d)(1), states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:

- Is located on an infill site,
- Is a residential, mixed-use residential, or an employment center, and
- Is located in a transit priority area.

As described below, the proposed mixed-use residential project is a qualified "employment center" that is located on a site that meets the definition of a designated "transit priority area" on an "infill site" pursuant to SB 743:

- **Infill Site**: An infill site is defined as "a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses." The site is currently developed with approximately 71,250 square feet of shopping

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[38] California Resources Agency, Farmland Mapping and Monitoring Program. Santa Clara County Important Farmland 2010, accessed on accessed June 11, 2019.

[39] City of Cupertino, Zoning Map, http://www.cupertino.org/index.aspx?page=291, accessed on accessed June 11, 2019.

[40] City of Cupertino, Zoning Map, http://www.cupertino.org/index.aspx?page=291, accessed on accessed June 11, 2019.

[41] City of Cupertino, General Plan (Community Vision 2015–2040, Chapter 6, Environmental Resources and Sustainability, Figure ES-2, Mineral Resources.

center. Surrounding uses include the Glenbrook Apartments to the north, Cupertino Memorial Park and the Cupertino Senior Center to the east, De Anza College to the south, and the SR-85 on-ramp to the west.

- **Employment Center:** An employment center is defined as "a project located on property zoned for commercial uses with a floor area ratio (FAR) of no less than 0.75 and that is located within a transit priority area." The project site is zoned Planned Development with General Commercial and Residential (P(CG,RES)). The proposed mixed-use project would have a FAR of 1.56.
- **Transit Priority Area**: A transit priority area is defined as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations. The project site is within one-half mile of a "major transit stop" as defined by CEQA Guidelines Section 15191[42] and the Santa Clara Valley Transportation Authority (VTA).[43] The De Anza Transit Center located approximately 500 feet (0.1 miles) from the southeast corner of the project site and approximately 1,700 feet (0.31 miles) from the northwest corner of the project site, with six regular bus lines (23, 25, 53, 54, 55, and 81) and one rapid bus line (323), qualifies as a major transit stop. Route 23 and 25 have 10-minute frequency of service intervals at peak and mid-day times on weekdays.[44]

Accordingly, in compliance with SB 743 no significant aesthetic or parking impacts can be made in this environmental analysis and these topics are not discussed further in this Initial Study.

I. AIR QUALITY

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable Federal or State ambient air quality standards?	■	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	■	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	■

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[42] "CEQA Guidelines defines a major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[43] The Santa Clara Valley Transportation Authority (VTA) defines a "major bus stop" as a stop where six or more buses per hour stop during the peak period and is also referred to as a "high-quality transit" area.

[44] Santa Clara Valley Transportation Authority, Bus Schedules for Bus 23, 25, 53, 54, 55, 81, and 323. http://www.vta.org/routes/,accessed June 11, 2019.

INITIAL STUDY

GENERAL PLAN EIR

Chapter 4.2, Air Quality, of the General Plan EIR, addresses the air quality impacts associated with redevelopment of the project site. Air quality impacts were found to be significant and unavoidable in the General Plan EIR. General Plan EIR Mitigation Measures AQ-2a, AQ-2b and AQ-4b, which were adopted and incorporated into the General Plan, are project-specific mitigation measures that are required to be implemented and would reduce construction-related impacts and that the impacts of mobile sources of toxic air contaminants (TACs) that are not covered under the Bay Area Air Quality Management District (BAAQMD) permits are considered during subsequent project-level environmental review to a less-than-significant level.

While Chapter 4.2, Air Quality, of the General Plan EIR addresses the impacts associated with the development Housing Element Site A3 (The Oaks Shopping Center) the analysis was performed at a program level. This section analyzes the types and quantities of air pollutant emissions that would be generated by the construction and operation of the proposed project.

EXISTING CONDITIONS

Air Pollutants of Concern

Criteria Air Pollutants

Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the National and California Clean Air Act, respectively. Air pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, all of them except for ROGs are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Toxic Air Contaminants

In addition to criteria air pollutants, both the State and federal government regulate the release of TACs. The California Health and Safety Code define a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to section 112(b) of the federal Clean Air Act (42 United States Code section 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (CalEPA), acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health. Where available, the significance criteria established by the BAAQMD are relied upon to make the determinations discussed below.

DISCUSSION

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including ROG, NOx, PM_{10}, and $PM_{2.5}$. The proposed project would involve the construction and subsequent occupancy of a mixed-use project with multi-family residential units, senior residential units, and general retail space. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards?

The San Francisco Bay Area Air Basin (SFBAAB) is currently designated as a nonattainment area for California and National ambient air quality standards (AAQS) for ozone (O_3) and for $PM_{2.5}$, and a nonattainment area under the California AAQS for PM_{10}.[45] Any project that does not exceed or can be mitigated to less than the BAAQMD significance levels does not add significantly to a cumulative impact.[46]

As discussed in criterion (a), the proposed project would involve the construction and subsequent occupancy of new residential units as well as new construction of retail space. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

The project site is adjacent to residential development to the north along Mary Avenue, and therefore, project construction emissions could potentially impact these on-site and adjacent sensitive receptors. Accordingly, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR to protect sensitive receptors from risks associated with the levels of pollution associated with construction on the project site.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction and operation of residential developments such as the proposed project would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical

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[45] California Air Resources Board (CARB), 2017, Area Designations: Activities and Maps, https://www.arb.ca.gov/desig/desig.htm, Accessed July 31, 2018. .

[46] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

manufacturing, and food manufacturing facilities. Residential and retail uses are not associated with foul odors that constitute a public nuisance. Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

II. BIOLOGICAL RESOURCES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species?	■	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community type?	☐	☐	☐	■
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	■	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species, their wildlife corridors, or nursery sites?	☐	☐	■	☐
e) Conflict with any local ordinances or policies protecting biological resources?	■	☐	☐	☐
f) Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	■

GENERAL PLAN EIR

Chapter 4.3, Biological Resources, of the General Plan EIR, addresses the impacts to biological resources associated with redevelopment of the project site. Impacts to biological resources were found to be less than significant and less than significant with implementation of General Plan EIR Mitigation Measure BIO-1, which were adopted and incorporated into the General Plan to ensure the protection of nesting raptors and other birds when in active use, as required by the federal Migratory Bird Treaty Act (MBTA) and the Department of Fish and Game Code (DFG Code).

EXISTING CONDITIONS

The project site and surrounding area has been urbanized and now supports roadways, structures, other impervious surfaces, areas of turf, and ornamental landscaping. Remnant native trees are scattered throughout the urbanized area, together with non-native trees, shrubs, and groundcovers. The site includes a one-story shopping center that is currently operating. The project site is bound by roadways on all sides and property beyond the roadways is developed with residential, senior services, and educational land uses.

As previously described, the CALVEG habitat mapping program,[47] classifies the site as an "urban area" that tends to have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance. The diversity of urban wildlife depends on the extent and type of landscaping and remaining open space, as well as the proximity to natural habitat. Trees and shrubs used for landscaping provide nest sites and cover for wildlife adapted to developed areas. Typical native bird species include the mourning dove, scrub jay, northern mockingbird, American robin, brown towhee, American crow, and Anna's hummingbird, among others. Introduced species include the rock dove, European starling, house finch, and house sparrow. Urban areas can also provide habitat for several species of native mammals such as the California ground squirrel and striped skunk, as well as the introduced eastern fox squirrel and eastern red fox. Introduced pest species such as the Norway rat, house mouse, and opossum are also abundant in developed areas.

Wetlands and jurisdictional waters within the city boundary include creek corridors and associated riparian scrub and woodland, and areas of freshwater marsh around ponds, seeps, springs, and other waterbodies. Some remnant stands of riparian scrub and woodland occur along segments of the numerous creeks through the urbanized valley floor. The project site does not encompass these creek corridors or contain other regulated waters. The project site is not near or adjacent to any natural areas.

There is no existing wildlife movement corridor designation on the site by any agency, including the United States Fish and Wildlife or the California Department of Fish and Wildlife.

The California Natural Diversity Database has no record of special-status plant or animal species on the project site or urbanized areas surrounding the project site. There is a possibility that birds could nest in trees and other landscaping on the project site. The nests of most bird species are protected under the MBTA when in active use and there is a remote possibility that one or more raptor species protected under the MBTA and DFG Code could nest on the project site. These include both the Cooper's hawk (*Accipiter cooperi*) and white-tailed kite (*Elanus leuocurus*), which have reported CNDDB occurrences within the city boundary, together with more common raptors such as red-tailed hawk, great horned owl, and American kestrel, all of which are protected by the MBTA and DFG Code when their nests are in active use. However, no essential habitat for these or other special-status species is present on the site due to its developed condition.

Numerous bat species are known to be in the Cupertino area, most of which are relatively common and are not considered special-status species. As previously stated, the CNDDB does not show any occurrences of special-status bats within the site vicinity or anywhere in Cupertino but does show records within several miles of Cupertino. The records include occurrences of Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), and Yuma myotis (*Myotis yumanensis*). These three species have no legal protected status under the State or federal Endangered Species Acts, but Townsend's big-eared bat is considered a Species of Special Concern by the CDFW. These species have various priority rankings with the Western Bat Working Group (WBWG), ranging from "High" for Townsend's big-eared bat, "Medium" for hoary bat, to "Low-Medium" for Yuma myotis. Bat species found

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[47] The CALVEG system was initiated in January 1978 by the Region 5 Ecology Group of the US Forest Service to classify California's existing vegetation communities for use in statewide resource planning. CALVEG maps use a hierarchical classification on the following categories: forest; woodland; chaparral; shrubs; and herbaceous.

in the Cupertino vicinity may forage and occasionally roost in the site vicinity, but because the Oaks Shopping Center is occupied, no suitable habitat for maternity roosts are on the site.

According to the Vegetation Map shown in the Environmental Resources and Sustainability Element of the General Plan most of the City, including the project site, is within the urban forest.[48] The City recognizes that every tree on both public and private property is an important part of Cupertino's urban forest and contributes significant economic, environmental and aesthetic benefits of the community.[49] The tree study inventory and assessment prepared for the project included an evaluation of 83 trees on the site that represent 11 species. According to the tree study, some of the trees qualify as protected trees pursuant to the City's Protected Tree Ordinance, Chapter 14.18. [50] The removal of Specimen trees requires the approval of a Tree Removal Permit which may also require replacement trees to be planted.

DISCUSSION

a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species??*

As stated above in the existing conditions discussion, there are no known occurrences of special-status plant or animal species and no suitable habitat for such species on the project site, but there is a possibility that birds that are protected by the MBTA could nest in trees and other landscaping on the project site. The analysis in the General Plan EIR found that impacts to special-status species, including nesting birds, would be reduced to less than significant with mitigation.

Avian injury and mortality resulting from collisions with buildings, towers and other man-made structures is a common occurrence in city and suburban settings. Some birds are unable to detect and avoid glass and have difficulty distinguishing between actual objects and their reflected images, particularly when the glass is transparent and views through the structure are possible. Night-time lighting can interfere with movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. The frequency of bird collisions in a particular area is dependent on numerous factors, including: characteristics of building height, fenestration (the arrangement of windows and doors on the elevations of a building) and exterior treatments of windows and their relationship to other buildings and vegetation in the area; local and migratory avian populations, their movement patterns, and proximity of water, food and other attractants, time of year; prevailing winds; weather conditions; and other variables.

The proposed project would alter the physical characteristics of the site, therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

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[48] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 6, Environmental Resources and Sustainability Element, Figure ES-1.

[49] City of Cupertino, Tree Protection and Tree Removal link on the City's website, Accessed May 6, 2019 at https://www.cupertino.org/our-city/departments/community-development/planning/residential-development/tree-protection-tree-removal.

[50] The Oaks Cupertino, CA Tree Assessment Plan, prepared for KTP Construction Management, LLC by Hort Science, May 11, 2018.

b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community type?*

As discussed in the existing conditions above and determined in the General Plan EIR, development of the proposed project would occur in urbanized areas where sensitive natural communities are absent. The project site does not include any wetlands or jurisdictional waters including creek corridors and associated riparian areas.[51] Therefore, *no impact* would occur, and no mitigation measures would be required. This criterion will not be discussed in the EIR.

c) *Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

As discussed in the existing conditions above, there are no wetlands, jurisdictional waters or other regulated waters on the project site; therefore, *no impact* would occur directly.

Indirect impacts to wetlands and jurisdictional other waters include: 1) an increase in the potential for sedimentation due to construction grading and ground disturbance, 2) an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and 3) an increase in the potential for water quality degradation due to increased levels in non-point pollutants. However, indirect impacts would be largely avoided through effective implementation of best management practices during construction and compliance with water quality controls.

As discussed below in Section VIII, Hydrology and Water Quality, of this Initial Study, water quality in stormwater runoff is regulated locally by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), which implements Provision C.3 of the Municipal Regional Storm Water NPDES Permit (MRP) adopted by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Adherence to these permit conditions requires the project to incorporate treatment measures, an agreement to maintain them, and other appropriate source control and site design features that reduce pollutants in runoff to the maximum extent practicable. Many of the requirements involve low impact development practices such as the use of onsite infiltration that reduce pollutant loading. Incorporation of these measures can even improve on existing conditions.

In addition, future development would be required to comply with the Municipal Regional NPDES Permit (CMC Chapter 9.18, Storm Water Pollution Prevention and Watershed Protection) and implement a construction Storm Water Pollution Prevention Plan (SWPPP) that requires the incorporation of best management practices to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The indirect water quality-related issues are discussed further in Section VIII, Hydrology and Water Quality, of this Initial Study. As discussed in Impact HYDRO-1, water quality impacts would be less than significant. Accordingly, indirect impacts to wetlands and jurisdictional waters would be *less than significant* and this issue will not be discussed further in the EIR.

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[51] City of Cupertino General Plan Amendment, Housing Element Update, and Associated Rezoning Project, Chapter 4.3, Biological Resources.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, their wildlife corridors, or nursery sites?

The project site is located in an urbanized area, bordered by existing roadways and other urban uses which preclude the presence of any important wildlife movement corridors across the site. The site contains no creeks or aquatic habitat that would support fish and proposed development would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nurseries. Wildlife species common to urban and suburban habitat could be displaced where existing structures are demolished and landscaping is removed as part of future development, but these species are relatively abundant, and adapted to human disturbance. The proposed project would remove most of the existing vegetation and would retain some of the existing trees. The proposed project would also include landscaping with approximately 400 additional trees that would provide replacement habitat for wildlife species that may have adapted to the project site. Therefore, project impacts on the movement of fish and wildlife, wildlife corridors, or wildlife nursery sites would be considered *less than significant* under this criterion and this issue will not be discussed in the EIR.

e) Would the project conflict with any local ordinances or policies protecting biological resources?

As discussed in criteria (a) through (d), above, development of the project site would occur in an urbanized area where sensitive biological and wetland resources are absent, and no major conflicts with the relevant policies or ordinances related to biological resources in the General Plan and/or CMC would occur. However, the removal of trees that qualify as protected trees pursuant to the City's Protected Tree Ordinance is proposed, which could result in a *potentially significant* impact until the need and nature of any required mitigation has been identified as part of the EIR.

f) Would the project conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?

No adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan includes the city or the project site, and the proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. Therefore, *no impact* would result under this criterion and this issue will not be discussed in the EIR.

III. CULTURAL RESOURCES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	☐	☐	■	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	■	☐	☐	☐

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?	■	☐	☐	☐

GENERAL PLAN EIR

Chapter 4.4, Cultural Resources, of the General Plan EIR, addresses the impacts to cultural associated with redevelopment of the project site and impacts were found to be less than significant. The following is a summary of Section, 4.4.1.2, Existing Conditions, of Chapter 4.4, which is based on the analysis of cultural resources conducted by Tom Origer & Associates on July 24, 2013, included as Appendix D, Cultural Resources Data, of the General Plan EIR. The cultural resources study consists of archival research at the Northwest Information Center at Sonoma State University, examination of the library and files, field inspection, and contact with the Native American community. As shown in Table 4.4-2, *Cultural Resources in the Project Study Area and Vicinity*, and on Figure 4.4-1, *Cultural Resources*, of the General Plan EIR, there are no identified cultural resources on the project site.

EXISTING CONDITIONS

As stated above, there are no known cultural resources (i.e., archeological or historical architectural resources) are located on the site. However, development at the project site was completed between 1973 and 1976,[52] which is within the 45-year age limit established by the State Office of Historic Preservation (OHP) for buildings that may be of historical value.[53] However, the existing buildings are not associated with significant cultural events or persons in California’s past and do not have any distinctive historical characteristics, and as such do not have any qualifying historical value.

Known cultural resources within 1 mile of the project site are the Le Petit Trianon at 21250 Stevens Creek Boulevard, the Gazebo Trim at Memorial Park, Memorial Park, Community Center, Sports Complex, and Engles Grocery "Paul and Eddie's” at 21619 Stevens Creek Boulevard.

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[52] Phase I Environmental Site Characterization, The Oaks Shopping Center, prepared by EBI Consulting, March 4, 2007.

[53] Public Resources Code Section 5024.1

DISCUSSION

a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?*

Under CEQA, both prehistoric and historic-period archaeological sites may qualify as historical resources.[54] Archaeological resources are addressed in criterion (b), and human remains are addressed below in criterion (c), below.

There are no local, State, or federally recognized historic properties on the project site or in the immediate vicinity. The historical building (Le Petit Trianon) located at 21250 Stevens Creek Boulevard is within 1 mile from the project site; however, construction of the proposed project would not affect this structure.

The project site currently has commercial buildings developed in 1973 and 1976. As described in the existing conditions above, the existing building does not meet the criteria for listing in the California Register of Historical Resources. Additionally, the General Plan EIR does not identify the project site or existing buildings as a historic resources and they are not listed as historic buildings.[55,56] Therefore, demolition of the existing buildings on the project site would not affect any historic resources. Therefore, impacts would be *less than significant* under this criterion and this issue will not be discussed in the EIR.

b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?*

Historical and pre-contact archaeological deposits that meet the definition of historical resource under CEQA section 21084.1 or CEQA Guidelines section 15064.5 could be present at the project site and could be damaged or destroyed by ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with development allowed under the proposed project. Should this occur, the ability of the deposits to convey their significance, either as containing information about prehistory or history, or as possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

A cultural resources study was prepared for the General Plan EIR. The cultural resources study did not identify any known archeological deposits on the project site. While the site is already a developed site, it could still contain subsurface archeological deposits, including unrecorded Native American prehistoric archeological materials. Therefore, any project-related ground-disturbing activities have the potential to affect subsurface prehistoric archaeological resources that may be present. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

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[54] California Code of Regulations, Title 14, Chapter 3, Section 15064.5(c), Determining the Significance of Impacts on Historical and Unique Archeological Resources.

[55] Office of Historic Preservation, 1995. Instructions for Recording Historical Resources, page 2.

[56] Office of Historic Preservation, Listed California Historical Resources, http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=43, accessed June 11,, 2019.

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Similar to the discussions under criteria (a) and (b), there are no known human remains of the project site; however, the potential to unearth unknown remains during ground disturbing activities associated with the construction of the project could occur. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

IV. ENERGY

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	■	☐

GENERAL PLAN EIR

Chapter 4.14, Utilities and Services Systems, of the General Plan EIR addressed the impacts to Energy associated with the redevelopment of the project into at most 27 dwelling units with a 30-foot height maximum. The General Plan EIR concludes that impacts to energy associated with the redevelopment of the project site would be less than significant and would not result in substantial increase in natural gas and electrical service demands, and would not require new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities. However, the General Plan EIR does not include an evaluation of wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, or whether the project conflicts or obstructs a State or local plan for renewable energy or energy efficiency, because the General Plan EIR was completed prior to the update to the CEQA Guidelines, Appendix G update in December 2018.

EXISTING CONDITIONS

Pacific Gas & Electric (PG&E) supplies electricity and natural gas to much of northern and central California – from Humboldt and Shasta counties in the north to Kern and Santa Barbara counties in the south – including the infrastructure for the City of Cupertino. Total electricity consumption in PG&E's service area is forecast to increase from 104,868 gigawatt-hours (GWh) in 2015 to 119,633 GWh in 2027.[57] The nearest PG&E substation to the project site is the Stelling Substation on North Stelling Road approximately 1 mile northeast of the project site. The nearest electricity transmission lines to the project site are located south of the project site along Stevens Creek Boulevard.[58]

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[57] California Energy Commission (CEC). 2017. California Energy Demand Updated Forecast, 2017-2027. https://efiling.energy.ca.gov/getdocument.aspx?tn=214635, accessed on June 11, 2019.

[58] California Energy Commission (CEC). 2012, October 25. Local Reliability Maps for 2013: Enlargement Maps. http://www.energy.ca.gov/maps/infrastructure/3part_enlargements.html, accessed on June 11, 2019.

The current project site is served by both electricity and natural gas connections. Electricity is supplied to the project site via infrastructure maintained by Pacific Gas & Electric (PG&E). Silicon Valley Clean Energy (SVCE), a locally controlled public agency that has a partnership with PG&E, supplies the electricity to the project site. SVCE provides a standard 50 percent renewable energy portfolio, in addition to a 100 percent renewable option that electricity customers can opt into. Natural gas and associated infrastructure are provided and maintained by PG&E.

Plan Bay Area 2040 is the Bay Area's current Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). An overarching goal of the regional *Plan Bay Area 2040* is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, vehicle miles traveled (also referred to as "VMT"), and associated greenhouse gas (GHG) emissions reductions. The project site is located in the Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas PDA and is a designated Transit Priority Area (TPA).[59]

Current energy demands derive from the operation of the one-story, approximately 71,250 square-foot shopping center with both commercial and office uses, built between 1973 and 1976. The existing buildings are currently occupied by restaurant, commercial, and office uses, which provide neighborhood serving uses. The shopping center is currently about 85 percent occupied, and according to the transportation analysis, prepare for the proposed project, the existing uses generate approximately 2,287 average daily weekday trips, with 57 AM (morning) peak hour trips and 230 PM (evening) peak hour trips.

DISCUSSION

a) *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The proposed project would demolish the existing commercial buildings and redevelop the site with up to 20,000 square feet of commercial space and 242 residential units on a designated Priority Development Area (PDA) and a Transit Priority Area (TPA). Construction activities use energy from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. The operation of the proposed mixed-use and residential buildings would use energy for cooling, heating, lighting, and landscape equipment, and for vehicle trips to and from the commercial building. The proposed project would generate a new total of 2,174 average daily weekday vehicle trips.

The proposed project is an infill development project that would result in an increase in land use intensity in a portion of the city. The project site currently has access to existing infrastructure and services; however, the proposed project would require the construction or installation of new on-site infrastructure and capacity enhancing alterations to existing on-site facilities to connect the new buildings to water, stormwater, sanitary sewer, electricity, and natural gas lines. Nevertheless, the construction of new on-site

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[59] *Plan Bay Area*, Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining, https://www.planbayarea.org/pda-tpa-map, accessed on July 11, 2019.

infrastructure and capacity enhancing alterations would be necessary as part of the construction of the residential-retail, townhome, and rowhouse buildings, and would be consistent with the design and installation of typical utility infrastructure for mixed-use or residential buildings. Therefore, the construction or installation of new infrastructure and capacity enhancing alterations would not be a wasteful, inefficient, or unnecessary use of energy.

The project provides connectivity to existing bicycle and pedestrian facilities and locates both commercial and residential uses close to transit, parks, schools, and other neighborhood serving uses. As discussed in Section XI, Population and Housing, the proposed project would not exceed the buildout projections established in the General Plan EIR and as discussed in Section IX, Land Use and Planning, the proposed project is within the permitted density on the project site.

The proposed mixed-use and residential buildings would be required to meet the 2019 Building and Energy Efficiency Standards of the California Public Resources Code, Title 24, Part 6 that will take effect on January 1, 2020, and apply to any project that is proposed to begin construction on or after August 2020. The 2019 Building Energy Efficiency Standards improve upon the 2016 Standards and require 53 percent or more and 30 percent or more energy efficiency for residential and non-residential buildings, respectively.[60] As described above in Section 3.1.4.2, Zoning, the City enforces the CalGreen Building Standards, which establish planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), in CMC Chapter 16.58, Green Building Standards Code Adopted. CMC Chapter 16.58, Section 16.58.220, Table 101.10 requires that non-residential new construction under 25,000 square feet shall achieve a minimum green building requirement of CALGreen Building Code per Chapter 5 of the California Green Building Standards Code. CMC Chapter 16.58, Section 16.58.220, Table 101.10 also required that residential new construction exceeding nine homes shall achieve a minimum green building requirement of GPR certified at minimum 50 points, Leadership in Energy and Environmental Design (LEED) Silver, or an alternate green building standard that is as stringent as LEED or other cited standards and is subject to third party verification.

Energy conserving features of the proposed project would include new landscaping that is native and/or adaptive, and drought resistant to conserve water and subsequently energy. Where glass features are considered, the proposed project would use non-reflective or “fritted glass” and opaque spandrel panels, in addition to incorporating overhanging roofs, projecting balconies, and set back facades that would reduce direct sunlight and reduce cooling costs.

New buildings constructed in accordance with the standards identified above would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Accordingly, impacts would be *less than significant,* and further discussion related to this criterion will not be included in the EIR.

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[60] California Energy Commission. March 2018. 2019 Building Energy Efficiency Standards. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed on June 11, 2019.

b) Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

As described in the Land Use and Zoning section of this Initial Study, the proposed project is an infill mixed-use project in a PDA and TPA pursuant to *Plan Bay Area* 2040. An overarching goal of the regional *Plan Bay Area* 2040 is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation. The project site is a designated neighborhood center in the General Plan, which is an area intended to provide shopping and gathering spaces for local residents. The General Plan specifically designated this location as a High Priority Housing Element Site in a major corridor to reduce traffic and environmental impacts, and therefore, support State and local planning efforts toward energy conservation. The proposed project would not conflict with, or obstruct, any plan for renewable energy or energy efficiency. Accordingly, impacts would be *less than significant,* and further discussion related to this criterion will not be included in the EIR.

V. GEOLOGY AND SOILS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Directly or indirectly cause potential substantial adverse effects including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
ii) Strong seismic ground shaking?	☐	☐	☐	■
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	■
iv) Landslides, mudslides or other similar hazards?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	■	☐	☐	☐

GENERAL PLAN EIR

Chapter 4.5, Geology, Soils, and Seismicity, of the General Plan EIR, addressed geological and seismic-related impacts associated with redevelopment of the project site. The following discussion is based on project site information available in Section 4.5.1.2, Existing Conditions, of Chapter 4.5.

EXISTING CONDITIONS

A Preliminary Geotechnical Investigation dated January 1, 2014 was prepared for the proposed project by Langan Treadwell Rollo.[61] The purpose of the Preliminary Geotechnical Investigation was to obtain subsurface data, evaluate the potential geologic hazards at the site, and provide preliminary conclusions and recommendations for the geotechnical aspects of future development on the project site. The discussion that follows includes data from this report.

The following describes the existing conditions on the project site with respect to geology and soil:

- **Geology.** The City of Cupertino lies in the west-central part of the Santa Clara Valley, a broad, mostly flat alluvial plain that extends southward from San Francisco Bay. These alluvial fan deposits are typically coarse grained with large amounts of gravel deposits. The surficial geology is described as young, unconsolidated Quaternary alluvium. The site is generally flat with elevation ranging from 290 to 300 feet above mean sea level.
- **Soils.** This analysis uses web-accessible soil mapping data compiled by the United States Department of Agriculture's Soil Conservation Survey and the California Soil Resource Laboratory hosted by University of California at Davis to identify the major soil types on the project site. The predominant soil types for the project site are soils of the Urban Land-Flaskan and Urban Land-Botella complexes generally formed on slopes of 0 to 2 percent. In almost all instances, these soils are reportedly deep and well drained, and are typified by low runoff. Additionally, surface material encountered in the borings conducted as part of the Preliminary Geotechnical Investigation consists of 3.5 to 6 inches of asphalt concrete (AC) and aggregate base (AB). Beneath the pavement Section, the upper 2.5 to 6.5 feet consists of very dense sand with clay and gravel and hard sandy clay with varying amounts of gravel. Below these depths are medium dense to very dense sand and gravel layers with varying amounts of silt and clay interbedded with 3.5 to 7 feet thick layers of very stiff to hard sandy clay, sandy clay with gravel, and clay with gravel to the maximum explored depth of 46.5 feet.
- **Fault Rupture.** The San Francisco Bay Area is one of the most seismically active regions in the United States. The significant earthquakes that occur in the Bay Area are generally associated with crustal movement along well-defined active fault zones such as the San Andreas Fault system. Many of these zones exhibit a regional trend to the northwest. The site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone (known formerly as a Special Studies Zone) or a Santa Clara County-designated Fault Rupture Hazard Zone. No active fault traces are known to cross the site.

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[61] Langan Treadwell Rollo, 2014. Preliminary Geotechnical Investigation, The Oaks 21255 Stevens Creek Boulevard Cupertino, California, January 1, 2014.

- **Liquefaction.** The site is not located within a seismically inducted liquefaction hazard zone, as mapped by the State of California and Santa Clara County. During cyclic ground shaking, such as seismic shaking during an earthquake, cyclically induced stresses may cause increased pore water pressures within the soil matrix, resulting in liquefaction. Liquefied soil may lose shear strength that may lead to large shear deformations and/or flow failure. Liquefied soil can also settle as pore pressures dissipate following an earthquake. Soils most susceptible to liquefaction are loose to moderately dense, saturated, non-cohesive soils with poor drainage, such as sands and silts with interbedded or capping layers of relatively low permeability soil.
- **Lateral Spreading.** Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil are displaced laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Because of the low potential for liquefaction, the risk of lateral spreading at the site is also considered low.
- **Soil Expansion.** Laboratory test conducted as part of the Preliminary Geotechnical Investigation results indicate the near surface clay layer has low expansion potential with plasticity index of 9.
- **Groundwater.** During the Preliminary Geotechnical Investigation, groundwater was not encountered while drilling the three borings. The California Geological Survey, as part of their Seismic Hazards Zone Report (Cupertino Quadrangle) reported the historic high groundwater level in this area as approximately 50 feet below ground surface (bgs).
- **Paleontological Resources.** A review of the University of California's Museum of Paleontology's fossil locality database was conducted for the City of Cupertino during the General Plan Update process for the current Community Vision 2015-2040. No paleontological resources have been identified on the project site; however, the presence of Pleistocene deposits that are known to contain fossils indicates that overall the city could contain paleontological resources.

DISCUSSION

a) *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; (iv) Landslides, mudslides or other similar hazards?*

Development on the project site is subject to compliance with State and City building requirements. Compliance with the California Building Code (CBC) requirements would help ensure that the proposed structures would be able to: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural as well as non-structural damage. The CBC has been adopted by the City of Cupertino in CMC Title 16, Buildings and Construction.

Development on the project site would not cause or exacerbate 1) the rupture of a known earthquake fault; 2) strong seismic ground shaking; 3) seismic-related ground failure, including liquefaction; or 4) earthquake triggered landslides, mudslides, or other similar hazards. Therefore, *no impact* would occur, and earthquake related conditions will not be discussed further in the EIR.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Substantial soil erosion or loss of topsoil during construction could, in theory, undermine structures and minor slopes during development of the project site. However, compliance with existing regulatory requirements, such as the implementation of grading erosion control measures specified in the CBC and the CMC, would reduce impacts from erosion and the loss of topsoil. Examples of these control measures are best management practices such as hydroseeding or short-term biodegradable erosion control blankets; vegetated swales, silt fences, or other forms of protection at storm drain inlets; post-construction inspection of drainage structures for accumulated sediment; and post-construction clearing of debris and sediment from these structures.

CMC Section 16.08.110 requires the preparation and submittal of Interim Erosion and Sediment Control Plans for all projects subject to City-issued grading permits, which would minimize the removal of topsoil, avoid overly steep cut and/or fill slopes, and protect existing vegetation during grading operations. These requirements are broadly applicable to residential development projects. Adherence to these regulations would help reduce the impacts of project development as they relate to substantial soil erosion or loss of topsoil. Therefore, the impacts would be *less than significant*. This criterion will not be discussed in the EIR.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As discussed above, the project site is not located within a seismically induced liquefaction hazard zone. Because of the low potential for liquefaction, the risk of lateral spreading at the site would also be low. As previously discussed, the project site is generally flat with on-site elevations ranging from 290 to 300 feet above mean sea level. The properties surrounding the project site are also typified by low topographic relief. Therefore, the impacts of project development as they relate to liquefaction, lateral spreading, and landslides would be *less than significant*. This criterion will not be discussed in the EIR.

d) Would the project be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils can undergo dramatic changes in volume in response to variations in soil moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils.

The proposed project would be subject to the CBC regulations and provisions, as adopted in Title 16, Buildings and Construction of the CMC and enforced by the City during plan review prior to building permit issuance. The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition, and also regulates grading activities, including drainage and erosion control. Thus, compliance with existing regulations and policies would ensure that the potential future development impacts permitted under the proposed project would be reduced. Therefore, the impacts of project development as they relate to expansive soils would be *less than significant*. This criterion will not be discussed in the EIR.

e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The development of the proposed project would not require the construction or use of septic tanks or alternative wastewater disposal systems. Wastewater generated by the proposed project would be conveyed to the existing municipal sanitary sewer system in Cupertino with existing connections to the sanitary sewer system on Stevens Creek Boulevard and Mary Avenue; new connections are not required. Therefore, *no impact* would result under this criterion and this issue will not be discussed in the EIR.

For more discussion on wastewater, see Section XVI, Utilities and Service Systems, below.

f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

As discussed above in existing conditions, while no paleontological resources have been identified within the project location, because the proposed project requires substantial excavation that could reach significant depths below the ground surface where no such excavation has previously occurred, there could be fossils of potential scientific significance and other unique geologic features that have not been recorded. Such ground-disturbing construction associated with development under the proposed project could cause damage to, or destruction of, paleontological resources or unique geologic features. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

VI. GREENHOUSE GAS EMISSIONS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	■	☐	☐	☐
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	■	☐	☐	☐

GENERAL PLAN EIR

Chapter 4.6, Greenhouse Gas Emissions, of the General Plan EIR, addressed the cumulative impacts from greenhouse gas emissions associated with General Plan buildout, including redevelopment of the project site. Greenhouse gas emission (GHG) impacts were found to be less than significant in the General Plan EIR.

EXISTING CONDITIONS

The primary source of GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHGs identified by the Intergovernmental Panel on Climate Change that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[62,63]

DISCUSSION

a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

A project does not generate enough GHG emissions on its own to influence global climate change; therefore, this section measures the project’s contribution to the cumulative environmental impact. The proposed project would contribute to global climate change through direct and indirect emissions of GHGs from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, and solid waste generation. In addition, construction activities would generate a short-term increase in GHG emissions. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

b) *Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

As discussed in criterion (a) above, the proposed project would contribute to global climate change through direct and indirect emissions of GHGs. Therefore, conflicts with applicable plans adopted for the purpose of reducing GHG emissions could result in *potentially significant* impacts. The need and nature of any required mitigation will be identified as part of the EIR.

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[62] Intergovernmental Panel on Climate Change, 2001, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press.

[63] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	■	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c) Emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	■	☐	☐	☐
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☐	☐	■
e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people living or working in the project area?	☐	☐	☐	■
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	■

GENERAL PLAN EIR

Chapter 4.7, Hazards and Hazardous Materials, of the General Plan EIR, addressed the hazards- and hazardous materials-related impacts as a result of redevelopment under the General Plan including on the project site. Impacts were found to be less than significant and less than significant with mitigation measures to ensure that development on sites with known hazardous contamination would be less than significant. General Plan EIR Mitigation Measures HAZ-4a and HAZ-4b are required to be implemented for sites with known contamination and potential residual contamination. As discussed in Chapter 4.7, the project site is not listed as a site with known contamination or potential residual contamination; therefore, the identified mitigation measures in the General Plan EIR do not apply to the proposed project. The following is a summary of Section, 4.7.1.2, Existing Conditions, of Chapter 4.7.

EXISTING CONDITIONS

Two Phase 1 Environmental Site Assessments (ESAs), dated March 14, 2007 and September 18, 2015, were prepared for the project site by EBI Consulting and PIERS Environmental Services, respectively.[64] The Phase 1 ESA dated March 14, 2007 recommended the continued implementation of the existing asbestos Operation and Maintenance Plan due to suspected asbestos containing materials (ACM) in the floors, walls, and ceiling of the buildings. The Phase 1 ESA dated September 18, 2015 concluded that there was no evidence of Recognized Environmental Conditions (RECs) or Vapor Encroachment Conditions (VECs) on the project site and recommended no further investigation. In addition, a Limited Environmental Site Characterization (ESC) dated January 28, 2015 was prepared for the project site by Langan Treadwell Rollo. The purpose of the ESC was to conduct soil sampling and analysis to assess the potential for soil contamination resulting from past and/or present site activities and nearby off-site operations. The objective of the ESC was to preliminarily characterize the soil to assist in the offhaul of excavated material from the site. The ESC did not find elevated concentrations of hazardous waste exceeding State of California or Federal levels and no contaminated or hazardous materials were encountered. The following information and subsequent impact discussion are based in part on the information in these reports.

The term “hazardous material,” as used in this Initial Study, includes all materials defined in the California Health and Safety Code section 25501 definition of a hazardous material; that is: “A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.”

The project site is located within the General Plan land use designation Commercial/Residential and Zoning District P(CG,RES), and is currently developed with approximately 71,250 square feet of existing development, as well as associated surface parking. Development of the project site began in 1973; therefore, the existing buildings may contain asbestos-containing materials (ACM) or lead-based paint (LBP), which have only been regulated in construction since the early 1970s.

The closest school, De Anza College, a community college, is located approximately 140 feet to the south, directly across from the project site. The nearest daycares are Cupertino Child Care located 0.30 miles to the northeast; Village Little Preschool Center located 0.35 miles to the east; and Buzy Tots Childcare and Preschool located approximately 0.25 miles to the southeast. There are no other existing or proposed schools or daycares within 0.25 miles of the project site.

As shown in the General Plan EIR (see Table 4.7-2, *Hazardous Materials and LUST* [leaking underground storage tanks] and Figure 4.7-1, *Hazardous Material Sites*) the project site is not included on a list of hazardous materials sites complied pursuant to Government Code section 65962.5. Furthermore, the project-specific Phase I ESAs and ESC did not find documentation or physical evidence of soil,

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[64] PIERS Environmental Services, 2015. Phase 1 Environmental Site Assessment, 21255-21275 Stevens Creek Boulevard, Cupertino, CA, dated September 18, 2015. EBI Consulting, 2007, Phase 1 Environmental Site Assessment, The Oaks Shopping Center, Cupertino, California, dated March 14, 2007.

groundwater, or soil gas impairments associated with the use or past use of the project site.[65] In addition, a recent search of the Department of Toxic Substances Control EnviroStor Database, which is the data management system for tracking our cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further, did not include any hazardous materials sites on the project site.[66]

The nearest public airports are San José International Airport, approximately 7 miles to the northeast, and Palo Alto Airport, approximately 9.5 miles to the northwest. The nearest heliports are McCandless Towers Heliport, approximately 5.5 miles to the northeast, and County Medical Center Heliport, approximately 6 miles to the east. The nearest private airport is Moffett Federal Airfield, approximately 6 miles to the north.

The California Department of Forestry and Fire Protection (CAL FIRE) has designated the project site as a Local Responsibility Area (LRA) and a non-very high fire hazard severity zone (NVHFHSZ). The project site is not near lands designated as a State Responsibility Area (SRA) by CAL FIRE. The nearest SRA is approximately 2 miles to the west of the project site.[67] The project is not located within the wildland-urban interface, which is an area of transition between wildland (unoccupied land) and land with human development (occupied land). [68]

DISCUSSION

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

The proposed project, a mixed-use commercial and residential development, is not a type of project that would involve the routine transport or disposing of hazardous materials. Project operation would involve the use of small amounts of hazardous materials for cleaning and maintenance purposes, such as cleansers, degreasers, pesticides, and fertilizers. These potentially hazardous materials would not be of a type or be present in sufficient quantities to pose a significant hazard to public health and safety or the environment. Furthermore, such substances would be used, transported, stored, and disposed of in accordance with applicable federal, State, and local laws, policies, and regulations. Any businesses that transport, generate, use, and/or dispose of hazardous materials in Cupertino are subject to existing hazardous materials regulations, such as those implemented by Santa Clara County Department of Environmental Health Hazardous Materials Compliance Division (HMCD), and hazardous materials permits from the Santa Clara Fire Department (SCCFD). The SCCFD also conducts inspections for fire safety and hazardous materials management of businesses and multi-family dwellings, in accordance with the City of Cupertino Hazardous Materials Storage Ordinance (CMC Chapter 9.12, Hazardous Materials Storage).

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[65] PIERS Environmental Services, 2015. Phase 1 Environmental Site Assessment, 21255-21275 Stevens Creek Boulevard, Cupertino, CA, dated September 18, 2015. EBI Consulting, 2007, Phase 1 Environmental Site Assessment, The Oaks Shopping Center, Cupertino, California, dated March 14, 2007.

[66] California Department of Toxic Substances Control EnviroStor Database, https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=21267+Stevens+Creek+Boulevard, accessed July 2019;

[67] California Department of Forestry and Fire Protection (CAL FIRE). 2008. Cupertino, Very High Fire Hazard Severity Zones in LRA. http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/santa_clara/Cupertino.pdf

[68] California Department of Forestry and Fire Protection (CAL FIRE). 2018. Wildland-Urban Interface Fire Threat. http://www.arcgis.com/home/item.html?id=d45bf08448354073a26675776f2d09cb, accessed June 11, 2019.

Thus, associated impacts from the operational phase of the project would be *less than significant* and this will not be discussed in the EIR.

While construction activities at the project site would possibly involve the use of hazardous materials, such as petroleum-based fuels for maintenance and use of construction equipment, and coatings used in construction, these materials would be transported to the site periodically by vehicles and would be present temporarily during construction. These potentially hazardous materials would not be of a type, or occur in sufficient quantities on-site, to pose a significant hazard to public health and safety or the environment, and their use during construction would be short-term. Additionally, as with proposed project operation, the use, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations.

Based on the analytical results from the Limited ESC, none of the soils at the project site that are proposed to be excavated for off-site disposal contains elevated concentrations exceeding State of California or Federal hazardous waste levels. Therefore, soils removed from the site during excavation activities will most likely be disposed of as unrestricted waste and no soil management plan or a health and safety plan excavated soils would be required at this time. However, if contaminated or hazardous materials are encountered during the excavation activities occurring during the construction phase, a soil management plan and health and safety plan would be required. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As described under criterion (a) above, operation and construction of the proposed project would involve the storage and use of common cleaning substances, building maintenance products, paints, and solvents, as well as petroleum-based fuels for maintenance and construction equipment, and coatings used in construction. All of the existing buildings on the project site were developed beginning in 1973; thus, the buildings may contain ACM and LBP. The Phase 1 ESA completed in March 14, 2007 recommends the continued implementation of the existing asbestos Operation and Maintenance Plan. An impact could occur if construction and operation of the proposed project creates conditions where hazardous materials could easily contaminate surrounding soil, water, or air. The most likely scenarios would be from the demolition of buildings containing ACM or from rainwater runoff spreading contaminated waste. Stormwater runoff is discussed in Section VIII, Hydrology and Water Quality, of this Initial Study and impacts were found to be less than significant.

The proposed project, a mixed-use development, is not considered the type of project that would create a hazardous materials threat to the users of the site or the surrounding land uses. The Santa Clara County HMCD is the Certified Unified Program Agency (CUPA) for Santa Clara County including the City of Cupertino and is responsible for enforcing Chapter 6.95 of the California Health and Safety Code. As the CUPA, Santa Clara County HMCD is required to regulate hazardous materials business plans (HMBP) and chemical inventories, hazardous waste and tiered permitting, underground storage tanks, and risk-management plans. The HMBP is required to contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on development sites. The HMBP also contains an emergency-response plan, which describes the procedures to mitigate hazardous release, procedures, and equipment to minimize potential damage of a hazardous materials release, and provisions for immediate notification of the Governor's Office of Emergency Services (Cal OES) and other emergency-response personnel, such as the SCCFD. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release to reduce potential adverse impacts. Furthermore, Santa Clara County HMCD is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventive measures to minimize the risk of a spill or release of hazardous substances. Compliance with these regulations would ensure that the risk of accidents and spills is minimized to the maximum extent practicable during the operation of the proposed project. Consequently, operational impacts would be *less than significant* under this criterion and this issue will not be discussed in the EIR.

All spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable State and local regulations. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements set forth by the Santa Clara County HMCD would be required through the duration of the construction of each individual development project. The Phase I ESAs revealed visible evidence of ACM, and LBP may still be present on the project site due to the age of the project site properties and existing buildings. Removal of these types of hazardous materials would be conducted by contractors licensed to remove and handle these materials and in accordance with existing federal, State, and local regulations, including United States Environmental Protection Agency's National Emission Standards for Hazardous Air Pollutants (Code of Federal Regulation Part 61), Bay Area Air Quality Management District's Regulation 11, Title 8 of the California Codes of Regulations, the Unified Program, and the City's General Plan Health and Safety Element Policy HS-6.1, and would ensure that risks associated with demolition and the transport, storage, use, and disposal of such materials would be reduced to the maximum extent practical. Consequently, associated impacts from demolition phase of the project would be *less than significant* under this criterion and this issue will not be discussed in the EIR.

c) Would the project emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

De Anza College is located directly south of Stevens Creek Boulevard, within 140 feet of the project site. In addition, one pre-school is located within 0.25-miles of the project site. The proposed project would not involve the storage, handling, or disposal of hazardous materials in sufficient quantities to pose a significant risk to the public. As described under criterion (b) the proposed project is not considered the type of project that would create a hazardous materials threat to the users of the site or the surrounding land uses. As the CUPA, Santa Clara County HMCD is required to regulate HMBPs and chemical inventories, hazardous waste and tiered permitting, underground storage tanks, and risk-management plans. Compliance with existing regulations would ensure that the risk of accidents and spills is minimized to the maximum extent practicable. However, due to the close proximity of sensitive receptors at the schools, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

d) Would the project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?

As described in the Existing Conditions section above, the project site is not included on a list of hazardous materials sites complied pursuant to Government Code section 65962.5. Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

e) For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people living or working in the project area?

The project site is not within an airport land use plan or within 2 miles of a private airstrip or public use airport. Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City of Cupertino Office of Emergency Services is responsible for coordinating agency response to disasters or other large-scale emergencies in the City of Cupertino with assistance from the Santa Clara County Office of Emergency Services and the SCCFD. The Cupertino Emergency Operations Plan (EOP)[69] establishes policy direction for emergency planning, mitigation, response, and recovery activities within the city. The Cupertino EOP addresses interagency coordination, procedures to maintain communications with County and State emergency response teams, and methods to assess the extent of damage and management of volunteers.

The proposed project would not block roads and would not impede emergency access to surrounding properties or neighborhoods. As described in the project description section above, emergency vehicle access would be provided at one point located on Stevens Creek Boulevard, and three points located on Mary Avenue.

During demolition and construction, vehicles, equipment, and materials would be staged and stored on a portion of the project site. The construction site and staging areas would be clearly marked, and construction fencing would be installed to prevent disturbance and safety hazards. No staging would occur in the public right of way. A combination of on- and off-site parking facilities for construction workers would be identified during demolition, grading, and construction. The proposed project would not interfere with an adopted emergency response plan, or emergency evacuation plan; therefore, impacts would be *less than significant* under this criterion and this issue will not be discussed in the EIR.

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[69] City of Cupertino, Office of Emergency Services. *Emergency Operations Plan.* September 2005.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project site is fully developed and is surrounded by built-out urban use. The project site is not in a very high fire hazard severity zone within the Local Responsibility Areas of Cupertino and the project site is not within the General Plan designated Wildland-Urban Interface Area.[70] Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

VIII. HYDROLOGY AND WATER QUALITY

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) Impede or redirect flood flows?	☐	☐	■	☐
d) In a flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	☐	☐	■	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	☐

GENERAL PLAN EIR

Chapter 4.8, Hydrology and Water Quality, of the General Plan EIR, addressed the hydrology- and water quality-related impacts as a result of redevelopment of the project site. These impacts were identified as less than significant in the General Plan EIR. The following is a summary of Section, 4.8.1.2, Existing Conditions, of Chapter 4.8.

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[70] City of Cupertino. 2015. General Plan: Community Vision 2015-2040, Health and Safety Chapter, Figure HS-1.

EXISTING CONDITIONS

The project site lies within the Junipero Serra Channel watershed. No creeks are present on the project site. In addition to the natural drainage system, a network of storm drains collects runoff from City streets and carries it to the creeks and San Francisco Bay.

The City of Cupertino Department of Public Works is responsible for the design, construction, and maintenance of City-owned facilities including public streets, sidewalks, curb, gutter, storm drains. The capacity of the storm drain facilities within the City of Cupertino were evaluated and documented in the 2018 Storm Drain Master Plan, which identifies the areas within the system that do not have the capacity to handle runoff during the 10-year storm event, which is the City's design standard. The project site is located in an area where the storm drains are potentially deficient (Stevens Creek Boulevard and Mary Avenue) in conveying a 10-year storm. The lines along Steven Creek Boulevard, at to the south and Mary Avenue to the northeast are currently under capacity and designated as low priority for replacement.[71]

The project site lies within the Santa Clara Subbasin of the Santa Clara Valley Groundwater Basin, as does the entire city. In 2012, approximately 40 percent of the water used in Santa Clara County was pumped from groundwater.[72] The rest of the water used in the county is purchased from the Santa Clara Valley Water District (SCVWD), which receives surface water from the State Water Project and the Central Valley Project. Additional details on water usage and local water purveyors are provided in Section XVI, Utilities and Service Systems*,* of this Initial Study.

Santa Clara Valley streams do not receive discharges from industrial or municipal wastewater sources.[73] Industrial discharges are routed to municipal sanitary sewers and then to regional municipal wastewater treatment plants that discharge treated effluent to the tidal sloughs of San Francisco Bay. The NPDES permit program was established by the federal Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm sewer systems (MS4s). Municipal storm water discharge in the City of Cupertino is subject to the Waste Discharge Requirements of Municipal Regional Permit (MRP; Order Number R2-2015-0049) and NPDES Permit Number CAS612008, which became effective on January 1, 2016.

The San Francisco Bay RWQCB monitors surface water quality through implementation of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) and designates beneficial uses for surface water bodies and groundwater within the Santa Clara Valley. The Basin Plan also contains water quality criteria for groundwater. Groundwater quality in the Santa Clara subbasin is generally considered to be good and water quality objectives are met in at least 95 percent of the County water supply wells without the use of treatment methods.[74]

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[71] Schaaf & Wheeler Consulting Civil Engineers. 2018. Cupertino Storm Drain Master Plan.

[72] Santa Clara Valley Water District, 2012, Annual Groundwater Report for Calendar Year 2012.

[73] Santa Clara Basin Watershed Initiative, 2003, Volume 1, Watershed Characteristics Report, http://www.scbwmi.org/ accessed on June 11, 2019.

[74] Santa Clara Valley Water District, 2012, Santa Clara Valley Water District, 2012. 2012 Groundwater Management Plan.

The project site is not located in a FEMA-designated 100-year floodplain or Special Flood Hazard Area. The project site is not within a dam inundation zone. The City of Cupertino is more than 8 miles south of San Francisco Bay and is more than 100 feet above mean sea level, which places the city at a distance that is considered too far to be affected by a tsunami.[75] There are no large bodies of water within the City of Cupertino or near the project site.

DISCUSSION

a) *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Because the project would disturb one or more acres during construction, the project applicant would be required to comply with the NPDES Permit and submit Permit Registration Documents to the California State Water Resources Control Board prior to the start of construction. The Permit Registration Documents include a Notice of Intent (NOI) and a site-specific construction SWPPP. The SWPPP describes the incorporation of Best Management Practices (BMPs) to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. New requirements by the State Water Resources Control Board would also require the project applicant to prepare a construction SWPPP that includes post-construction treatment measures aimed at minimizing stormwater runoff. With implementation of these measures, water quality impacts during construction would be *less than significant* and this issue will not be discussed further in the EIR.

In addition, all new development or redevelopment projects that create and/or replace 10,000 square feet or more of impervious surfaces would be required to incorporate source control, site design, and stormwater treatment measures into the project, pursuant to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) C.3 requirements. The requirements include minimization of impervious surfaces, measures to detain or infiltrate runoff from peak flows to match pre-development conditions, and agreements to ensure that the stormwater treatment and flow control facilities are maintained in perpetuity. The proposed project would implement the following measures:

- Site Design Measures: minimization of impervious surfaces, minimum impact street and parking lot design, self-retaining (bioretention) areas.
- Source Control Measures: drainage to sanitary sewer; beneficial landscaping (minimize irrigation, runoff, pesticides and fertilizers); regular maintenance, including pavement sweeping, catch basin cleaning, and good housekeeping.
- Treatment Systems: bioretention areas through landscaping and silva cells throughout the property totaling 10,320 square feet, which is 52 square feet over the required amount.

Implementation of these measures and compliance with the C.3 requirements of the MRP would ensure that post-development impacts to water quality would be *less than significant* and this issue will not be discussed further in the EIR.

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[75] Association of Bay Area Governments, 2014, Interactive Tsunami Inundation Map, http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami, accessed on June 11, 2019.

Adherence to applicable water quality regulations, preparation of a SWPPP, implementation of best management practices during construction, and compliance with the CMC would ensure that water quality standards are not violated during construction. Implementation of stormwater site design, source control, and stormwater treatment measures and compliance with C.3 provisions of the MRP and the City of Cupertino's stormwater requirements would result in less-than-significant impacts during operation of the project. Consequently, potential impacts associated with water quality during construction and operation would be *less than significant* and this issue will not be discussed further in the EIR.

b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The project would be connected to municipal water supplies and does not propose any groundwater wells on the property. The project site is supplied by San José Water Company, which obtains its water from groundwater production (40 percent), purchases of surface water from the SCVWD (50 percent), and local mountain surface water (10 percent).[76] The 2015 *Urban Water Management Plan* for the SCVWD, which includes the area for the project site, states that there is sufficient water for SCVWD customers for normal, single-dry, and multiple-dry years until 2025. The SCVWD identifies actions within the water shortage contingency plan that would ensure water demand is met through 2040.[77] Therefore, the project would not result in a depletion of groundwater supplies or result in a lowering of groundwater levels. Water supply is discussed in Section XVI, Utilities and Service Systems, below. For the reasons stated above, the project would have a *less-than-significant* impact to groundwater recharge and this issue will not be discussed further in the EIR.

The proposed project would be located on a site that is developed and currently has a high percentage of impervious surfaces. Because the proposed project would include a total of 247,222 square feet of impervious surfaces,[78] the proposed project would be required to include 10,268 square feet of bioretention areas.[79] The proposed project would include 10,320 square feet of bioretention areas, which is 52 square feet greater than the required amount. The bioretention areas would be incorporated into the landscaped areas throughout the project site and would contribute to groundwater recharge by infiltration. Therefore, the project would have a *less-than-significant* impact on groundwater supplies and groundwater recharge and this issue will not be discussed further in the EIR.

c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious*

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[76] San José Water Company, For Your Information, Education and Safety, Water Supply, https://www.sjwater.com/for_your_information/education_safety/water_supply, accessed on June 11, 2019.

[77] Santa Clara Valley Water District, 2015 Urban Water Management Plan, http://www.valleywater.org/uploadedFiles/Services/CleanReliableWater/WaterSupplyPlanning/Urban_Water_Managment_Plan/SCVWD%202015%20UWMP-Report%20Only.pdf, accessed on June 11, 2019.

[78] The existing site contains 307,444 square feet of impervious surface area, of which 235,102 square feet will be replaced and 12,120 square feet will be added. This will be offset by treating 10,320 square feet.

[79] Santa Clara Valley Water District Municipal Regional Stormwater NPDES Permit C.3 requires 4 percent of the proposed impervious surface be treated to control the flow of stormwater and stormwater pollutants from new development, http://www.scvurppp-w2k.com/pdfs/1516/c3_handbook_2016/SCVURPPP_C.3_Technical_Guidance_Handbook_2016_Chapters.pdf, accessed on June 11, 2019.

> *surfaces, in a manner which would: result in substantial erosion, siltation, or flooding on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?*

The project site is currently developed with a one-story shopping center that is connected to the City's storm drain system. The proposed redevelopment activities would not involve the alteration of any natural drainage channels or any watercourse.

As described in the 2018 Storm Drain Master Plan, the project site is located in an area where the storm drains are deficient in conveying water from a 10-year storm. The lines along Steven Creek Boulevard, to the south and Mary Avenue to the northeast, are currently under capacity and designated as low priority for replacement.[80] However, the proposed project would not exacerbate this existing condition. The proposed project would provide 20 bio-retention and flow-through planter landscaped areas on the project site. (See Figure 11) These would collect runoff from roof areas, parking lots, sidewalks and streets for treatment and flow control prior to discharge into the on-site storm drain system, which connects to the City's storm drain system on Stevens Creek Boulevard and Mary Avenue. When combined, the on-site water treatment areas would exceed the C.3 of the MRP required treatment areas by 52 square feet (10,268 square feet require compared to 10,320 square feet proposed).

The project applicant would be required, pursuant to the C.3 provisions of the MRP, to implement construction phase BMPs, post-construction design measures that encourage infiltration in pervious areas, and post-construction source control measures to help keep pollutants out of stormwater. In addition, post-construction stormwater treatment measures would be required, because the project would create and/or replace more than 10,000 square feet of impervious surface. These measures would reduce the amount of stormwater runoff from the project.

During construction, project applicants are subject to the NPDES construction permit requirements, including preparation of a SWPPP. The SWPPP includes erosion and sediment control measures to stabilize the site, protect slopes and channels, control the perimeter of the site, minimize the area and duration of exposed soils, and protect receiving waters adjacent to the site. Once constructed, the requirements for new development or redevelopment projects include source control measures and site design measures that address stormwater runoff and would reduce the potential for erosion or siltation. In addition, Provision C.3 of the MRP would require the project to implement stormwater treatment measures to contain site runoff, using specific numeric sizing criteria based on volume and flow rate.

With implementation of these erosion and sediment control measures and regulatory provisions to limit runoff for new development sites, the proposed project would not result in significant increases in erosion and sedimentation or contribute to flooding on-site or off-site. Therefore, the impacts would be *less than significant,* and this criterion will not be discussed further in the EIR.

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[80] Schaaf & Wheeler Consulting Civil Engineers. 2018. Cupertino Storm Drain Master Plan.

d) In flood hazard, tsunami, or seiche zones, would the project risk the release of pollutants due to project inundation?

The project site is not located in close proximity to San Francisco Bay of the Pacific Ocean, and is not within a mapped tsunami inundation zone.[81] There are no large bodies of water in the vicinity of the project site, therefore there would be no potential for seiches to impact the project site. The project site is also outside of the Stevens Creek Reservoir dam inundation zone.[82] In addition, the site is in a relatively flat area of the City and is outside of the ABAG mapped zones for earthquake-induced landslides or debris flow source areas.[83] Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

e) Would the project conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project site is not within the purview of a sustainable groundwater management plan. The San Francisco Bay RWQCB monitors surface water quality through implementation of the Water Quality Control Plan for the San Francisco Bay Basin, also referred to as the “Basin Plan” and designates beneficial uses for surface water bodies and groundwater within the Santa Clara Valley. The Basin Plan also contains water quality criteria for groundwater.

As required by stormwater management guidelines discussed under criterion (a), best management practices and low impact development measures would be implemented across the project site during both construction and operation of the proposed project. These measures would control and prevent the release of sediment, debris, and other pollutants into the storm drain system. Implementation of best management practices during construction would be in accordance with the provisions of the SWPPP, which would minimize the release of sediment, soil, and other pollutants. Operational best management practices would be required to meet the C.3 provisions of the MRP. These best management practices include the incorporation of site design, source control, and treatment control measures to treat and control runoff before it enters the storm drain system. The proposed treatment measures would include the use of several bioretention areas to treat and detain runoff prior to discharge to the City’s storm drain system. In addition, as discussed in criterion (b), the project would be connected to municipal water supplies and does not propose any groundwater wells on the property. The depth of groundwater is estimated to be 25 to 30 feet below ground surface and the proposed project would not disturb groundwater during construction. With implementation of these best management practices and low impact development measures in accordance with City and MRP requirements, the potential impact on water quality would be *less than significant*. Accordingly, the proposed project would not conflict with or obstruct the implementation of the Basin Plan. This criterion will be not discussed as part of the EIR.

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[81] Association of Bay Area Governments, 2019. *Interactive Tsunami Inundation Map.* http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami accessed on June 11,, 2019.

[82] Santa Clara County Fire Department. 2012. Joint Stevens Creek Dam Failure Plan. https://www.cupertino.org/home/showdocument?id=7424

83 Association of Bay Area Governments, 2019. Rainfall-Induced Landslides, Debris Flow Source Areas and Earthquake Induced Landslides. Accessed at http://resilience.abag.ca.gov/landslides/ accessed on June 11,, 2019.

IX. LAND USE AND PLANNING

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Physically divide an established community?	☐	☐	☐	■
b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

GENERAL PLAN EIR

As discussed in Chapter 4.9, Land Use and Planning, of the General Plan EIR, impacts were determined to be less than significant as a result of redevelopment of the project site. The General Plan EIR analyzed the impacts of this project site with heights ranging from 60 to 75 feet for the retail component and a residential density of up to 35 dwelling units per acre. The following is a summary of Section, 4.9.1.2, Existing Conditions, of Chapter 4.9.

EXISTING CONDITIONS

General Plan

The General Plan land use designation for the site is Commercial/Residential. The General Plan also places the project site within the Heart of the City Special Area, which is within the *Heart of the City Specific Plan* (Specific Plan). The Specific Plan is the primary land use document for development in the Heart of the City Special Area. The project site is in the West Stevens Creek Boulevard subarea of the Specific Plan. Mixed Commercial/Residential with residential located behind primary uses (quasi-public/public facilities) and above the ground level is permitted in the West Stevens Creek Boulevard subarea.

The General Plan also identifies the project site as the Oaks Gateway, which is an important entrance point to the city. General Plan Policy LU-14.5 (Oaks Gateway Node) states that the Oaks Gateway is a retail and shopping node and new residential, if allowed, should be designed on the "mixed-use village" concept.[84] The General Plan describes the mixed-use urban village as sites that provide parcel assembly, complete site redevelopment, mixed-use village layout with streets, alley, sidewalks, and open spaces, a mix of retail uses, public open spaces, and high-quality, pedestrian-oriented design.[85]

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[84] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-44.

[85] City of Cupertino General Plan (Community Vision 2015-2040), Chapter 3, Land Use and Community Design Element, page LU-18.

The General Plan's Housing Element identifies the project site as Priority Housing Element Site A3 (The Oaks Shopping Center), which has a maximum height limit of 45 feet and the maximum density of 30 dwelling units per acre (du/ac).[86]

Zoning

The project site is zoned Planned Development with General Commercial and Residential (P(CG,RES)), which as described in CMC Section 19.80.010,[87] this zoning district is intended to provide a means of guiding land development or redevelopment of the city that is uniquely suited for planned coordination of land uses. Development in this zoning district provides for a greater flexibility of land use intensity and design because of accessibility, ownership patterns, topographical considerations, and community design objectives.

For projects that comply with General Plan Housing Element Strategy HE-2.3.7 (Density Bonus Ordinance), which is codified in Title 19, Zoning, Chapter 19.56 Density Bonus, changes to development standards or zoning code requirements may be allowed under certain conditions.[88]

DISCUSSION

a) *Would the project physically divide an established community?*

Because the development of the proposed project would occur on a site that is currently developed for commercial use, the proposed project would retain the existing roadway patterns, and would not introduce any new major roadways or other physical features through existing residential neighborhoods or other communities that would create new barriers, the project would not physically divide an established community. Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

b) *Would the project cause a significant environmental impact due to a conflict with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

The proposed project would continue the existing development pattern of the city by redeveloping a Housing Element site with a mix of uses compatible with the surrounding neighborhood. The proposed project would include a mixed-use development, with 18 buildings ranging from three to six stories, including 242 residential units, up to 20,000 square feet of retail space, below- and at-grade parking, and associated landscape and hardscape areas. The proposed project would be consistent with the types of development envisioned in the Oaks Gateway and Heart of the City Special Area, and the Specific Plan. The proposed project is within the permitted density for the project site (30 du/ac). The proposed project

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[86] *Heart of the City Specific Plan* and page 15 (height), and City of Cupertino General Plan (Community Vision 2015-2040), Chapter 4, Housing Element, Table HE-5: Summary of Priority Housing Element Sites to Meet the RHNA - Scenario A, page HE-17.

[87] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.80, Planned Development, Section 19.80.010, Purpose.

[88] City of Cupertino Municipal Code, Title 19, Zoning, Chapter 19.56 Density Bonus, Sections 19.56.030, Density Bonus, and 19.56.040, Incentives or Concessions, Waives and Reduction of Parking Standards.

is eligible for a Density Bonus pursuant to CMC Chapter 19.56 and includes a waiver for development standards for height, slope setbacks, and the organization of the senior housing units.

The General Plan EIR evaluated building heights up to 75 feet on the project site and determined that impacts would be less than significant with respect aesthetics and hazards. The proposed height increase of 79.5 feet is slightly higher than what was evaluated in the General Plan EIR. As described earlier in this Environmental Analysis, no aesthetic-related impacts may be determined for this proposed project pursuant to SB 743. Furthermore, the project is not within an airport land use plan, and no impact associated with hazards due to the additional height would occur. With respect to the waiver for slope setbacks and whether the senior units are all in one building or dispersed on the site, these development standards were not established for the purposes of avoiding or mitigating an environmental effect. Accordingly, no impact would occur as a result of these project features.

Furthermore, the proposed project would be consistent with the types of development envisioned in the General Plan and Specific Plan. Therefore, impacts would be *less than significant,* and this issue will not be discussed further in the EIR.

X. NOISE

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards?	■	☐	☐	☐
b) Generation of excessive groundborne noise levels?	■	☐	☐	☐
c) For a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or pubic use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

GENERAL PLAN EIR

Chapter 4.10, Noise, of the General Plan EIR, addressed the noise impacts associated with redevelopment of the project site. Noise impacts were found to be significant and unavoidable in the General Plan EIR. No feasible mitigation measures were identified to reduce project-level and cumulative permanent ambient noise impacts and cumulative noise impacts to a less-than-significant level. Project-specific noise evaluation would be required to assess noise impacts from the proposed redevelopment of the site. The following is a summary of Section, 4.10.1.3, Existing Conditions, of Chapter 4.10.

EXISTING CONDITIONS

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, State of California, and City of Cupertino have established criteria to protect public health and safety and to prevent disruption of certain human activities.

The project site is bounded by Mary Avenue to the north and east, Stevens Creek Boulevard to the south, a SR-85 on-ramp to the west. The project site is surrounded by residential land uses to the north (Glenbrook Apartments), the Cupertino Senior Center and Cupertino Memorial Park to the east, De Anza College to the south, and residential and industrial land use to the west beyond SR-85. The apartments to the north of the project site are the closest sensitive receptors of noise generated by the construction and operation of the proposed project.

The principal noise sources in the project area are traffic noise from I-280. The nearest public airports are San José International Airport, approximately 7 miles to the northeast, and Palo Alto Airport, approximately 9.5 miles to the northwest. The nearest heliports are McCandless Towers Heliport, approximately 5.5 miles to the northeast, and County Medical Center Heliport, approximately 6 miles to the east. The nearest private airport is Moffett Federal Airfield, approximately 5.5 miles to the north.

DISCUSSION

a) *Would the project cause the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards?*

The types of uses associated with the operation of the proposed project are not typically considered to generate excessive noise. However, due to the proximity of the proposed development to the adjacent residences to the north, noise impacts from operation and construction are considered to be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

b) *Would the project generate excessive groundborne noise levels?*

Residential and retail uses, such as those proposed by the project, are not typically associated with the ongoing generation of excessive levels of vibration or groundborne noise from operations. However, due to the proximity of the proposed development to the adjacent residences to the north, vibration impacts may be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

c) *For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The proposed project is not located within an airport land use plan or within 2 miles of an airport. The nearest public airports are San José International Airport, approximately 7 miles to the northeast, and Palo

Alto Airport, approximately 9.5 miles to the northwest. The proposed project is not located within the immediate vicinity of a private airstrip or heliport. The nearest heliports are McCandless Towers Heliport, approximately 5.5 miles to the northeast, and County Medical Center Heliport, approximately 6 miles to the east. The nearest private airport is Moffett Federal Airfield, approximately 5.5 miles to the north. At these relatively long distances from the aircraft facilities, the proposed project would not expose residents to excessive noise levels from private airstrip or heliport noise. Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

XI. POPULATION AND HOUSING

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	■	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

GENERAL PLAN EIR

As discussed in Chapter 4.11, Population and Housing, of the General Plan EIR, impacts were determined to be less than significant as a result of redevelopment of the project site. The General Plan would introduce approximately 16,855 new jobs and 4,421 households[89] to Cupertino. These new jobs and households combined with existing conditions would result in 44,242 jobs and 25,820 households at the 2040 buildout horizon. The General Plan EIR included an evaluation of the project site (Housing Element Site 18) with a density of 35 du/ac resulting in 235 net residential units. Impacts at this density were determined to be less than significant.

EXISTING CONDITIONS

The project is anticipated to be completed by 2023. According to ABAG's 2019 Projections, Cupertino would have 64,730 residents and 37,060 jobs by 2025.[90] There are no existing residential units on site. However, the project site has approximately 71,520 square feet of retail and office uses. Applying the

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[89] Jobs were calculated applying the City's generation rates as follows; 4,040,231 square feet of office allocation divided by 300 square feet equals 13,467 jobs; 1,343,679 square feet of commercial allocation divided by 450 square feet equals 2,986 jobs; and 1,339 hotel rooms at .3 jobs per room equals 402 jobs for a total of 16,855 jobs.

[90] Association of Bay Area Governments (ABAG), Projections 2019, https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra, accessed on July 11, 2019.

generation rates applied in the General Plan EIR, the existing uses generate 135 employees; therefore, the proposed project would have a net decrease of 65 employees.[91]

DISCUSSION

a) *Would the project induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The proposed project would result in a planned level of growth based on the local growth projections in the General Plan. The proposed project would not require any General Plan or Zoning Amendments. Based on an average household size of 2.87 persons,[93] it is assumed the proposed project would increase the number of residents on the site by 695.[94] Applying the generation rate of one job for every 450 square feet of commercial uses, the proposed project would generate 45 employees.[95] The proposed project would also include a full service staff of 25 employees including leasing agents, security staff, and maintenance personnel that would be present on site to manage the property for a total of 70 employees.

Given the nature and location of the project, a mixed-use development with a senior housing component across from De Anza College, it is likely that many of the residents will come from Cupertino and the surrounding area. Conservatively assuming all 695 new residents and 45 employees would move to Cupertino, the new residents would represent about 1 percent of the General Plan's residential buildout and a net decrease in employees (70 employees compared to 135 employees). However, even if they were new employees, they would only represent about twentith of a percent of the employee projections by 2025.[96]

This level of growth would be consistent with the regional planning objectives established for the Bay Area, and the proposed growth at the project site was considered in the General Plan and the General Plan EIR. Furthermore, the developable area at the project site and the surrounding the area is already developed and is well served by utility and transportation infrastructure. The proposed project would be infill development within the boundaries of the existing Oaks Shopping Center. While the proposed project may require on-site infrastructure improvements, these improvements would be made to accommodate the proposed new development and would not accommodate additional growth beyond that need. Therefore, associated impacts would be *less than significant* under this criterion and this issue will not be discussed in the EIR.

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[91] 85 percent occupancy of approximately 71,250 square feet (about 60,563 square feet) of retail divided by 450 square feet per employee equals 135 employees. 135 existing employees – 70 proposed employees = 65 fewer employees.

[93] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 *Projections,* which shows the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino.

[94] 242 new units multiplied by 2.87 persons per unit equals 695 new residents.

[95] 20,000 square feet of retail divided by 450 square feet per employee equals 45 employees.

[96] 695 new residents divided by 64,730 projected residents = 1.07 percent.
70 new employees divided by 37,060 projected employees = 0.19 percent

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project would introduce new housing and retail facilities on the existing Oaks Shopping Center site that could accommodate 695 new residents and 70 employees. No housing units are currently located on the project site and proposed project would introduce new housing. Therefore, the proposed project would not displace existing housing units or necessitate the construction of housing elsewhere. Therefore, *no impact* would occur under this criterion and this issue will not be discussed in the EIR.

XII. PUBLIC SERVICES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	■	☐
Police protection?	☐	☐	■	☐
Schools?	☐	☐	■	☐
Libraries?	☐	☐	■	☐

GENERAL PLAN EIR

As discussed in Chapter 4.12, Public Services and Recreation, of the General Plan EIR, impacts were determined to be less than significant as a result of redevelopment of the project site. The proposed project would construct a 242-unit and up to 20,000-square-foot residential mixed-use project, which is within the development projections for the site that were evaluated in the General Plan EIR and would not directly result in an increase in any additional new population growth beyond what was accounted for in the General Plan EIR.

EXISTING CONDITIONS

The public service providers for the project site are as follows:

- The City of Cupertino contracts with Santa Clara County Fire District (SCCFD) for fire protection, emergency, medical, and hazardous materials services.
- The City of Cupertino contracts with Santa Clara County Sheriff's Office (Sheriff's Office) and West Valley Patrol Division for police protection services.

- The project site is in the Cupertino Union High School District. Future residents of the project site could attend the following public schools in the project area: William Faria Elementary School, approximately 0.30 miles southeast of the project site; Garden Gate Elementary School, approximately 0.45 miles north of the project site; Abraham Lincoln Elementary School, John F. Kennedy Middle School, and Monte Vista High School, approximately 0.60 miles southwest of the project site; Homestead High School located 0.70 miles to the north; West Valley Elementary School and Cupertino Middle School, approximately 1 mile northwest of the project site; Collins Elementary School and Sam H. Lawson Middle School, approximately 1 mile northeast of the project site.
- The Santa Clara County Library District govern and administers seven community libraries, one branch library, two bookmobiles, the Home Service Library, and the 24-7 online library for all library users. The Cupertino Library located on the 10800 Torre Avenue in Cupertino, approximately 1 mile southeast of the project site, is the closest library and is operated by Santa Clara County Library District.

DISCUSSION

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, and libraries?

The primary purpose of a public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times or other performance objectives. Public service facilities may need improvements (i.e., construction, renovation or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities.

As discussed in Section XI, Population and Housing, above, the proposed project would result in a net increase of 695 residents and fewer employees (70 compared to 135) at the project site. Given the proposed project would represent about 1 percent of the expected increase in population foreseen in General Plan and regional planning efforts, and because the proposed project would not increase what was accounted for in the General Plan EIR, which found impacts to be less than significant under full buildout conditions, it would not exceed contribute to the need for new construction or expansion of an existing fire, police, or library facility that would serve the project site. The proposed project includes 242 residential units of which 39 are designated senior units. Therefore, it is assumed the future residents of up to 203 units could generate school-age children that could attend CUSD schools. However, the project would be required to pay the required school impact fees for new residential and office development pursuant to Government Code section 65995. Therefore, the increase in demand for school services would be offset and no impact would occur. The level of development proposed by the project is within the level analyzed for the project site in the General Plan EIR, which found public service impacts to be less than significant. Accordingly, a *less-than-significant* impact would result under this criterion and this issue will not be discussed in the EIR.

XIII. PARKS AND RECREATION

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
b) Result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, or result in the need for new or physically altered park and recreational facilities, the construction of which could cause significant environmental impacts?	☐	☐	■	☐

GENERAL PLAN EIR

As discussed in Chapter 4.12, Public Services and Recreation, of the General Plan EIR, impacts were determined to be less than significant as a result of intensified development of the project site.

EXISTING CONDITIONS

The City of Cupertino Department of Recreation and Community Services is responsible for the maintenance of the City's parks and community and recreational facilities. The City has an adopted parkland dedication standard of 3 acres of parkland for every 1,000 residents. There is a total of approximately 223 acres of parkland in Cupertino. The City's existing level of service of 3.6 acres of parkland and open space per 1,000 residents.[97]

The City parks near the project site are the Cupertino Memorial Park, located approximately 500 feet to the east and the Mary Avenue Dog Park, located approximately 0.5 miles to the northwest.[98]

Regional park facilities operated by the Midpeninsula Regional Open Space District (MROSD) and the Santa Clara County Parks could be used by residents of the project site. The closest MROSD parks to Cupertino are the Fremont Older, Picchetti Ranch, and Rancho San Antonio County Park/Open Space Preserve, which are located just southwest and west of the city boundaries, respectively. Santa Clara County Park facilities that serve Cupertino include Rancho San Antonio County Park, south of I-280 and west of Foothill Boulevard, and the Stevens Creek County Park.

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[97] Draft Parks and Recreation System Master Plan, January 2019. page 47.

[98] City of Cupertino, Recreation and Community Services Department, City Park Finder, http://gis.cupertino.org/parkfinder, accessed June 12, 2019.

DISCUSSION

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?*

The proposed project would offer passive recreation facilities for its residents including outdoor landscaped common areas. In addition to these facilities, new residents of the proposed project would also use existing local and regional parks and recreational facilities, including Cupertino Memorial Park and Mary Avenue Dog Park. As discussed in Section XI, Population and Housing, above, the proposed project would result in up to 695 new residents at the project site. To meet the City's parkland-to-resident ratio of 3 acres of parkland for every 1,000 residents, the proposed project would be required to provide 2.08 acres of parkland.[99] Although the proposed project would not provide on-site parkland, the proposed project's payment of City-required impact fees would contribute to the City's parks and recreation fund. The proposed project would be required to comply with CMC Chapter 14.05, Park Maintenance Fee, and Chapter 18.24, Dedications and Reservations, which require the payment of impact fees to maintain existing parks and recreation facilities or for acquisition, improvement, expansion or implementation of parks and recreational facilities and offset their fair share of impacts to parklands. Therefore, considering the proposed project's provision of on-site recreational amenities in conjunction with the collection of impact fees that support the City's parks and recreation fund, the project's impacts on the City's recreational facilities would be *less than significant* and this issue will not be discussed further in the EIR.

New residents of the project site would also be expected to use the regional park facilities operated by the MROSD and the Santa Clara County Parks in the Cupertino area; however, given the vast size of these regional park facilities, the proposed project would not result in their substantial deterioration. Furthermore, according to the MROSD's Budget and Action Plan for Fiscal Year 2017-18, a portion of the MROSD's financing is provided by property taxes, which the proposed project is required to pay. Specifically, this Budget and Action Plan states "The District's primary funding source, property tax revenue, is also increasing this year due to the Bay Area's strong real estate market." As stated in the Budget and Action Plan, the 2017-18 budget charts a fiscally sound course through the next year with enhanced capacity to meet the expectations of the public who fund the MRSOD. The payment of fees combined with the increase in usage that could potentially result from the proposed project is not likely to require the construction of new built facilities over and above that already foreseen in the long-range planning completed for these regional park facilities in the vicinity of the project site. Therefore, due to the potential increase in daily users and through the payment of property taxes that fund the MROSD that is charged with maintaining the nearby regional parks, impacts to regional parks are considered *less-than-significant* and this issue will not be discussed further in the EIR.

b) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, or result in the need for new or physically altered*

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[99] 695 residents x 0.003 (3 acres of parkland per 1,000 residents) = 2.08 acres.

park and recreational facilities, the construction of which could cause significant environmental impacts?

As discussed in criterion (a) above, because of the proposed project's on-site open space features and the requirement to pay impact fees that support the City's parks and recreation fund, the project's impact on the City's recreational facilities would be less than significant. The project does not involve the construction of a park or any physical alterations to an existing park or recreational facilities; however, the payment of impact fees would go toward supporting the City's park fund that could be applied to the construction or expansion of recreational facilities that could have an adverse physical effect on the environment. It is not known at what time or location such facilities would be required or what the exact nature of these facilities would be, so it cannot be determined what specific environmental impacts would occur from their construction and operation. The payment of impact fees is a City requirement to offset the project's fair share of impacts to parklands. The City would be responsible for any CEQA review required for any future City project related to the expansion of or improvement to a City recreational facility. Accordingly, impacts to park and recreational facilities as a result of the proposed project would be *less than significant* and this criterion will not be discussed in the EIR.

XIV. TRANSPORTATION

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	■	☐	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	■	☐	☐	☐
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	■	☐
d) Result in inadequate emergency access?	☐	☐	■	☐

GENERAL PLAN EIR

The General Plan EIR included an analysis of 235 new units for the site; however, the proposed project would have only 242 new units on the project site. Traffic impacts were found to be significant and unavoidable in the General Plan EIR. Implementation of General Plan EIR Mitigation Measure TRAF-1 requires the City to commit to preparing and implementing a Transportation Mitigation Fee Program (TMFP) to guarantee funding for roadway and infrastructure improvements that are necessary to mitigate impacts from future projects based on the then current City standards. On August 15, 2017 a Nexus Study was completed to provide the City with the technical support to adopt the Traffic Impact Fee (TIF) Program. The City Council adopted the TIF Program on October 3, 2017. This program ensures that new development and redevelopment projects pay their fair share to mitigate traffic impacts at prior to Final Map approval.

EXISTING CONDITIONS

The project site is located at 21267 Stevens Creek Boulevard. As shown on Figure 2, the project site is bounded by Mary Avenue to the north and east, Stevens Creek Boulevard to the south, a SR-85 on-ramp to the west. The project site is accessible from Stevens Creek Boulevard and Mary Avenue.

Existing Pedestrian, Bicycle, and Transit Facilities

Pedestrian Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals. Pedestrian connectivity immediately surrounding the project site is provided by a mostly complete network of sidewalks and crosswalks. Continuous sidewalks exist along both Mary Avenue and Stevens Creek Boulevard. The Stevens Creek Boulevard/Mary Avenue intersection provides marked crossings for pedestrians and bikes on the intersection’s north, east, and south legs. Additionally, a marked crosswalk with a flashing beacon on Mary Avenue provides access to the project site from the Cupertino Memorial Park or Cupertino Senior Center.

Bicycle Facilities

Existing Class I bike facilities along Stevens Creek Boulevard and Mary Avenue provide bicycle access to the proposed project site. Along Stevens Creek Boulevard, green bike lanes are installed at the current project driveway. Class II bicycle lanes are lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are generally 5 feet wide. Adjacent vehicle parking and vehicle/pedestrian crossflow are permitted.[100]

In 2016, the City of Cupertino adopted a *Bicycle Transportation Master Plan* (Bike Plan), which is a citywide plan to encourage bicycling as a safe, practical and healthy alternative to the use of the family car. The Bike Plan discusses the Cupertino’s current bicycle network, identifies gaps in the network, and proposes improvement projects to address the identified gaps.[101] The 2016 Bicycle Plan includes standards for engineering, encouragement, education, and enforcement intended to improve the bicycle infrastructure in the City to enable people to bike to work and school, to utilize a bicycle to run errands, and to enjoy the health and environmental benefits that bicycling provides cyclists of every age.

The VTA adopted the Santa Clara Countywide Bicycle Plan (CBP) in 2018. The CBP guides the development of major bicycle facilities in the County by identifying Cross County Bicycle Corridors and other bicycle projects of countywide or intercity significance. There are no Cross-County Bicycle Corridors near the project site.

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[100] City of Cupertino, 2016 Bicycle Transportation Plan, Figure 1-4: Activity generators and existing bicycle network.

[101] City of Cupertino, 2016 Bicycle Transportation Plan, Figure 3-7: Bikeway projects.

Transit Facilities

Public transit service in Cupertino is provided by Valley Transportation Authority (VTA)-operated bus service, and Caltrain-operated commuter heavy rail service. The project site is within one-half mile of a “major transit stop” as defined by CEQA Guidelines Section 15191[102] and the Santa Clara Valley Transportation Authority (VTA).[103] The De Anza Transit Center located approximately 500 feet (0.1 miles) from the southeast corner of the project site and approximately 1,700 feet (0.31 miles) from the northwest corner of the project site, with six regular bus lines (23, 5, 53, 54, 55, and 81) and one rapid bus line (323), qualifies as a major transit stop. The nearest Caltrain station to the project site is the Sunnyvale station, which is located approximately 4 miles to north of the project site.

Airports

The nearest public airports are San José International Airport, approximately 7 miles to the northeast, and Palo Alto Airport, approximately 9.5 miles to the northwest. The nearest heliports are McCandless Towers Heliport, approximately 5.5 miles to the northeast, and County Medical Center Heliport, approximately 6 miles to the east. The nearest private airport is Moffett Federal Airfield, approximately 5.5 miles to the north.

Existing Trip Generation

A Transportation Analysis dated November 27, 2018 was prepared for the proposed project by Kimley Horn.[104] The existing shopping center was 85 percent occupied over the last 2 years. At 85 percent occupancy, the existing shopping center generates approximately 2,287 daily trips. The existing uses generate 57 AM peak hour (7:00 to 10:00 a.m.) trips made up of 36 inbound / 21 outbound trips and 230 PM peak hour (4:00 to 7:00 p.m.) trips made up of 110 inbound / 120 outbound trips.

DISCUSSION

a) *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

The traffic impact analysis (TIA) methodology is based on the guidelines of the City of Cupertino and Santa Clara Valley Transportation Authority (VTA), the congestion management agency for Santa Clara County. The VTA Congestion Management Program (CMP) TIA Guidelines (last updated in October 2014) present guidelines for assessing the transportation impacts of development projects and identifying whether improvements are needed to adjacent roadways, bike facilities, sidewalks, and transit services affected by the proposed project. The TIA guidelines have been adopted by local agencies within Santa Clara County, and are applied to analyze the regional transportation system. Pursuant to the TIA Guidelines, a TIA must be completed for Congestion Management Plan purposes for projects that meet or exceed the trip

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[102] “CEQA Guidelines defines a major transit stop” means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[103] The Santa Clara Valley Transportation Authority (VTA) defines a “major bus stop” as a stop where six or more buses per hour stop during the peak period and is also referred to as a “high-quality transit” area.

[104] Kimley Horn, 2018. Transportation Analysis, Westport Cupertino, November 27.

threshold of generating 100 or more net new weekday AM and PM peak commute times (i.e., AM [7:00 to 10:00 a.m.] and PM [4:00 to 7:00 p.m.]) or weekend peak hour trips, including both inbound and outbound trips. The proposed project is anticipated to generate approximately 2,174 gross daily trips; 108 gross AM peak hour trips (35 inbound / 73 outbound), and 186 gross PM peak hour trips (104 inbound / 82 outbound).

The proposed project includes an internal sidewalk and bicycle network, in addition to sidewalk modifications along Stevens Creek and Mary Avenue. The sidewalk modifications would include detaching the sidewalk along Stevens Creek Boulevard and required modifications along Mary Avenue to facilitate on and offsite improvements. The project site would continue to be accessible to pedestrians from Mary Avenue and Stevens Creek Boulevard, and on-site network would provide pedestrian and bicycle circulation within the project site. Additionally, the proposed project would include a Class IV separated bikeway on Stevens Creek Boulevard between Mary Avenue and SR-85. While future residents may use public transit, it would not place a sufficient demand on these existing services that new routes or changes to existing routes would be required.

Accordingly, the project could result in a *potentially significant* impact and this topic will be discussed further in the EIR.

b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

The proposed project could result in changes to vehicles miles traveled. Therefore, the impacts under this criterion are *potentially significant* and will be discussed further in the EIR.

c) *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

The proposed project would include one access point from Stevens Creek Boulevard and three additional access points off of Mary Avenue. The access for emergency vehicles would be provided at all four access points. Emergency access is discussed below in criterion (e). The proposed project would not modify any design features to a public road or introduce a potentially unsafe feature that would increase hazards. A *less-than-significant* impact would occur, and this topic will not be discussed further in the EIR.

d) *Would the project result in inadequate emergency access?*

Emergency response vehicles would access the project site from the access point off Stevens Creek Boulevard and three additional access points off of Mary Avenue. The circulation pattern on the project site would allow emergency vehicles full access to all internal streets. The SCCFD and City of Cupertino Building Division coordinate the review of building permits. All access driveways would be designed in accordance with City of Cupertino standards and would have to be reviewed and approved by SCCFD prior to construction. The proposed project plans would include approved fire and emergency access during all phases of construction and operation as required by the provisions of the City's Fire Code,[105] which regulates emergency access. Therefore, the proposed project would not result in inadequate emergency access and a *less-than-significant* impact would occur. This topic will not be discussed further in the EIR.

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[105] Cupertino Municipal Code, Title 16, Buildings and Construction, Chapter 16.40, Fire Code.

XV. TRIBAL CULTURAL RESOURCES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.	■	☐	☐	☐

GENERAL PLAN EIR

As described above in Section III, Cultural Resources, the General Plan EIR addressed impacts to cultural resources associated with redevelopment of the project site and impacts, which were found to be less than significant. The cultural resources study prepared for the General Plan EIR consists of archival research at the Northwest Information Center at Sonoma State University, examination of the library and files, field inspection, and contact with the Native American community. The cultural resources study addressed impacts associated with archeological resources, including those of Native Americans. As shown in Table 4.4-2, *Cultural Resources in the Project Study Area and Vicinity*, and on Figure 4.4-1, *Cultural Resources*, of the General Plan EIR, there were no identified cultural resources including those affiliated with Native Americans are present on the project site.

EXISTING CONDITIONS

Assembly Bill (AB) 52, which took effect on July 1, 2015, amended CEQA to add standards of significance that relate to Native American consultation and certain types of cultural resources. Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2015. In 2016, the Governor's Office of Planning and Research (OPR) adopted guidelines and the NAHC informed tribes which agencies are in their traditional area.

AB 52 requires the CEQA lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the Tribe requests, in writing, to be informed by the lead agency through formal notification of the proposed projects in the area. The consultation is required before the determination of whether a negative declaration, mitigated negative declaration, or EIR is required. In addition, AB 52 includes time limits for certain responses regarding consultation. AB 52 also adds “tribal cultural resources” (TCR) to the specific cultural resources protected under CEQA.[106] CEQA section 21084.3 has been added, which states that “public agencies shall, when feasible, avoid damaging effects to any tribal cultural resources.” Information shared by tribes as a result of AB 52 consultation shall be documented in a confidential file, as necessary, and made part of a lead agencies administrative record. The City of Cupertino has not received any request from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the city.

A TCR is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included a local register of historical resources, or if the City, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR.

DISCUSSION

a) *Would the proposed project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe?

Although AB 52 was not in effect at the time the General Plan EIR was certified and the definition of a TCR was not established, the General Plan EIR evaluated impacts to Native American resources. Therefore, the discussion in Section III, Cultural Resources, is applicable to impacts to TCRs. As discussed under criteria (b) and (d) in section IV, no known archeological resources, ethnographic sites or Native American remains are located on the project site; however, the potential to unearth unknown remains during ground disturbing activities associated with the construction of the project could occur. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

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[106] California Environmental Quality Act Statute, Section 21074.

XVI. UTILITIES AND SERVICE SYSTEMS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Require or result in the construction of new water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	■	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	■	☐	☐	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐

GENERAL PLAN EIR

Chapter 4.14, Utilities and Services Systems, of the General Plan EIR, included an analysis of impacts related to water supply, wastewater, solid waste, and energy conservation. Impacts were found to be less than significant and less than significant with mitigation. The City is required to implement General Plan Mitigation Measures UTIL-6a through UTIL-6c, and UTIL-8 to ensure impacts related to wastewater and solid waste are less than significant. General Plan Mitigation Measures UTIL-6a through UTIL-6c require the City to work with the Cupertino Sanitary District (CSD) to increase the available citywide treatment and transmission capacity, identify appropriate and current wastewater generation rates that are approved by CSD, and establish a monitoring and tracking system for wastewater generation to better understand the City's need for potential capacity upgrades from CSD. General Plan Mitigation Measure UTIL-8 requires the City to continue current recycling and zero-waste practices, monitor solid waste generation and seek new landfill sites to replace the Altamont and Newby Island landfills, at such time that these landfills are closed. These mitigation measures, which were previously adopted by the City and incorporated into the General Plan, will be implemented by the City.

EXISTING CONDITIONS

The following utility and service providers would serve the proposed project:

- The Cupertino Sanitary District (CSD) provides sanitary sewer services for the project site. Wastewater would be treated at the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP).

- The Santa Clara Valley Water District (SCVWD) is the primary water resources agency for Santa Clara County. The project site is located within the Cupertino Water service area, and Cupertino Water would supply water for the project. Water supply for Cupertino Water is a combination of groundwater from wells in the San José Water District and treated water purchased from SCVWD.
- Natural gas and electricity infrastructure would be supplied to the project site by PG&E. Electricity would be supplied by Silicon Valley Clean Energy.
- Telephone service would be provided by AT&T and other providers. Cable television service would be available from a number of providers, including Comcast.

Wastewater

The CSD maintains approximately 194.5 miles of sewer mains including the infrastructure in the vicinity of the project site.[107] The collected wastewater from the CSD service area is conveyed to the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP) through mains and interceptor lines shared with both the cities of San José and Santa Clara. The CSD is one of five tributary agencies that have a contractual treatment allocation agreement with the SJ/SCWPCP. The CSD has a contractual treatment allocation with the SJ/SCWPCP of 7.85 million gallon per day (mgd), on average. CSD wastewater flow to the SJ/SCWPCP was 5.3 mgd at the time of the General Plan EIR.[108] The CSD wastewater system also flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara is 13.8 mgd during peak wet weather flows. The existing CSD peak wet weather flow into the Santa Clara system is modeled at 13.29 mgd.[109]

Water Supply

The San José Water Company (SJWC) provides groundwater, imported treated water, and local surface water for an area of approximately 139 square miles including San José, Cupertino, Campbell, Monte Sereno, Saratoga, Los Gatos, and unincorporated areas within Santa Clara County. Most of SJWC's customers are residential or commercial.[110] The SJWC also provides water to industrial, municipal, private fire services, and public fire protection services. The SJWC sources water from the Santa Clara Valley Water District (SCVWD), the Santa Clara Subbasin, and the Los Gatos Creek and local watersheds from the Santa Cruz Mountains.[111] According to the SJWC 2015 Urban Water Management Plan, the 2015 water use target was estimated at 140 gallons per capita per day (gpcd) and the actual water use was 96 gpcd. The projected water use target for 2020 is 127 gpcd; the SJWC is on track to meet this demand.[112] In

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[107] Cupertino Sanitary District, 2016, Sewer Management Plan, page 23.

[108] City of Cupertino, General Plan (Community Vision 2015–2040, Appendix B: Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93.

[109] Mark Thomas. Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara. February 20, 2019.

[110] San José Water Company, 2016 Urban Water Management Plan, Chapter 3, System Description, page 3-1.

[111] San José Water Company, 2016 Urban Water Management Plan, Chapter 6, System Supplies, pages 6-1 and 6-2.

[112] San José Water Company, 2016 Urban Water Management Plan, Chapter 5, Baselines and Targets, page 5-2.

2015, the SJWC's actual water supply was 35,369-acre feet (af)[113] and the projected water supply for 2020 is 47,444 af.[114]

Solid Waste

Recology provides curbside recycling, garbage, and compost and yard waste service to the residents of Cupertino.[115] All non-hazardous waste is collected under the Recology contract is hauled to the Newby Island Landfill for processing. The City of Cupertino has a contract with the Newby Island Resources Recovery Park and Sanitary Landfill until 2023.[116] The Newby Island Resources Recovery Park and Sanitary Landfill is permitted to receive 4,000 tons of waste per day. CalRecycle lists the expected closure date of the landfill to be January 1, 2041. The landfill has a total capacity of 57.5 million cubic yards and a remaining capacity of 21.2 million cubic yards.[117] In addition to the Newby Island Landfill, solid waste generated in Cupertino can also be disposed of at the Altamont Landfill and Resource Recovery facility, the Corinda Los Trancos Landfill, Forward Landfill Inc., Guadalupe Sanitary Landfill, Kirby Canyon Recycling and Disposal Facility, the Monterey Peninsula Landfill, Recology Hay Road, the Vasco Road Sanitary Landfill, the Zanker Material Processing Facility, and the Zanker Road Class III Landfill.

Energy

The PG&E was incorporated in California in 1905 and provides natural gas and electric to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. The project site is currently served by existing PG&E distribution systems that would provide natural gas and electricity. PG&E produces or buys its energy from a mix of conventional systems to reach their customers.

DISCUSSION

a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?*

Wastewater Treatment Facilities

The CSD sewer collection system directs wastewater to the SJ/SCWPCP, which is jointly owned by the cities of San José and Santa Clara. Municipal storm water discharges in the City of Cupertino are subject to the Waste Discharge Requirements of the new Municipal Regional Permit (MRP; Order Number R2-2015-0049) and NPDES Permit Number CAS612008, which became effective on January 1, 2016. The MRP currently allows dry weather discharges of up to 167 million gallons per day (mgd) with full tertiary treatment, and wet weather discharges of up to 271 mgd with full tertiary treatment. As discussed below

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[113] There are 325,851 gallons in 1 acre-foot.

[114] San José Water Company, 2016 Urban Water Management Plan, Chapter 6, System Supplies, pages 6-10.

[115] City of Cupertino, Environmental Services, Garbage and Recycling, http://www.recyclestuff.org/Guides/CityGuideCupertino.pdf, accessed on June 11,, 2019.

[116] City of Cupertino, Garbage and Recycling Services Fact Sheet, http://www.recyclestuff.org/Guides/CityGuideCupertino.pdf, accessed on June 11,, 2019.

[117] California Integrated Waste Management Board, http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0003/Detail/, accessed on June 11,, 2019.

in criterion (c), future demands from the proposed project would not exceed the design or permitted capacity of the SJ/SCWPCP that serves the project site. Future water treatment demand was assessed in consultation with the City of Cupertino and includes consideration of development in the city through the 2040 buildout horizon of the General Plan. Therefore, development of the proposed project would not require any improvements not already considered and the impact of the proposed project on SJ/SCWPCP would be *less than significant.* Accordingly, this issue will not be discussed further in the EIR.

Storm Drainage

As previously discussed in Section VIII, Hydrology and Water Quality, the proposed project would not exceed the capacity of stormwater drainage system that serves the project site. All new development that, like the proposed project, creates or replaces 10,000 square feet or more of impervious surface would be subject to Provision C.3 guidelines for stormwater control. Through C.3 compliance, the proposed project would involve actions to minimize runoff from the project site as described in Section VIII, Hydrology and Water Quality, above. Additionally, the project would comply with CMC Chapter 9.18 described above in Section 3.1.4.2, Zoning, which is intended to provide regulations and give legal effect to certain requirements of the NPDES permit issued to the City.

As described in the 2018 Storm Drain Master Plan, the project site is located in an area where the storm drains are deficient in conveying the water from a 10-year storm. The lines on Mary Avenue and Stevens Creek Boulevard are currently under capacity and designated as low priority for replacement.[118] However, the proposed project would not exacerbate this existing condition. The proposed project would provide 20 bioretention and flow through planter water treatment areas and drainage management areas throughout the project site. These would collect runoff from roof areas, parking lots, sidewalks and streets for treatment and flow control prior to discharge into the internal storm drain system, which connects to the City's storm drain system on Mary Avenue and Stevens Creek Boulevard. When combined, the on-site water treatment areas would exceed the required treatment areas by 52 square feet (10,268 square feet require compared to 10,320 square feet proposed). Consequently, the proposed project would not require the expansion of existing stormwater facilities or the construction of new facilities, the construction of which could otherwise have significant impacts. Therefore, impacts would be *less than significant,* and this issue will not be discussed in the EIR.

Other Utility Facilities

Other utility facilities that serve the project site include electric power, natural gas, and telecommunications facilities. PG&E would supply natural gas and electricity infrastructure to the project site. Silicon Valley Clean Energy would provide electricity to the project site. AT&T and other providers would provide telephone service. Cable television service would be available from a number of providers, including Comcast. The proposed project is an infill development project that would result in an increase in land use intensity in a portion of the city that has access to existing infrastructure and services, which was accounted for in the General Plan EIR. The project would include appropriate on-site infrastructure to connect to the existing PG&E and telecommunication systems and would not require new off-site facilities

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[118] Schaaf & Wheeler Consulting Civil Engineers. 2018. Cupertino Storm Drain Master Plan.

and distribution infrastructure or capacity enhancing alterations to any existing facilities. Accordingly, impacts would be *less than significant,* and this issue will not be discussed further in the EIR.

b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

As shown in the General Plan EIR in Chapter 4.14, the water supply at project buildout year 2020 would be 13,078 acre feet per year (afy) and at General Plan buildout year 2040 would be 16,984 afy.[119] As discussed in the General Plan EIR, buildout of the General Plan would not result in insufficient water supplies from SJWC under normal year conditions or during single-dry year and multiple-dry years, with the proposed and existing water conservation regulations and measures in place. The water supply evaluation prepared for the General Plan EIR included new development in the city at a similar number of residential units proposed under the project (235 units compared to 242 units); therefore, water supply impacts were adequately addressed in the General Plan EIR. As discussed in Section IX, Land Use and Planning, the proposed project is consistent with the General Plan and the Zoning for the project site. A water supply evaluation dated May 15, 2018 was prepared for the project by Tully & Young and found that the forecast water supplies (37 afy) for the proposed project are expected to be fully met by the potable water supplies provided by the SJWC. Therefore, the proposed project will have a *less-than-significant* water supply impact, and this issue will not be discussed further in the EIR.

c) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Construction and operation of the proposed project could exceed the 13.8 mgd contractual limit through the City of Santa Clara. Therefore, the impacts under this criterion could be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR.

d) *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

As discussed in the existing conditions, above, the City contracts with Recology to provide solid waste collection services to residents and businesses in the city. The City has a contract with Newby Island Sanitary Landfill until 2023. In addition to the Newby Island Landfill, solid waste generated in Cupertino can also be disposed of at the Altamont Landfill and Resource Recovery facility, the Corinda Los Trancos Landfill, Forward Landfill Inc., Guadalupe Sanitary Landfill, Kirby Canyon Recycling and Disposal Facility, the Monterey Peninsula Landfill, Recology Hay Road, the Vasco Road Sanitary Landfill, the Zanker Material Processing Facility, and the Zanker Road Class III Landfill.

The proposed waste management for the proposed project would include the management of waste, recycling, and composting. Solid waste generated by construction of the proposed project would largely consist of demolition waste from the existing buildings as well as construction debris. The project would be required to comply with CMC Chapter 16.72, Recycling and Diversion of Construction and Demolition

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[119] One *acre-foot* equals about 326,000 gallons, or enough water to cover an *acre* of land, about the size of a football field, one *foot* deep.

Waste, and the City's Zero Waste Policy, which requires the recycling or diversion at least 65 percent of all generated construction and demolition (C&D) waste by salvage or by transfer to an approved facility. Prior to the permit issuance, the applicant is required to submit a properly completed Waste Management Plan, which includes the estimated maximum amount of C&D waste that can feasibly be diverted, which facility would handle the waste, and the total amount of C&D waste that would be landfilled. Compliance with CMC Chapter 16.72 and the City's Zero Waste Policy would reduce solid waste and construction-related impacts on the landfill capacity.

Based on the population and employment generation discussed in the project description section above, it is assumed the proposed project would introduce 695 new residents at buildout. The project would also include 70 new employees, which is 65 fewer than the number of employees currently on site. In 2017, Cupertino's actual disposal rate for residents was 3.6 pounds per person per day (PPD) with the target rate of 4.3 PPD. For employees, the disposal rate was 4.1 PPD with the target rate of 8.1 PPD. The City's disposal rates for both residents and employees have been below target rates and steadily decreasing since 2007, with the exception of 2014, when the actual employee rate (9.8 PPD) exceeded the target rate (8.10 PPD). Applying these disposal rates, the project would generate approximately 2,789 PPD or 1.39 tons per day (TPD) of new waste.[120] The current uses generate 135 employees[121] generates approximately 534 PPD or 0.27 TPD.[122] Therefore, the net increase in solid waste generation is 2,255 PPD or 1.12 TPD, which is well within the Newby Island Sanitary Landfill permitted daily disposal capacity of 4,000 TPD. Thus, impacts on landfill capacity would be *less than significant* and this topic will not be discussed further in the EIR.

e) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The City's per capita disposal rate for residents and employees in 2017 was 2.9 PPD and 3.3 PPD, respectively, which is below the 4.3 PPD and 8.1 PPD target rate established by CalRecycle.[123] As part of the *Countywide Integrated Waste Management Plan* to address waste management conditions within Santa Clara County, Cupertino adopted a Source Reduction and Recycling Element (SRRE)[124] and Household Hazardous Waste Element (HHWE)[125] in compliance with the California Integrated Waste Management Act.[126] The City has gone beyond the SRRE by implementing several programs, including the City's and Recology's organics or food waste collection program, and Environmental Recycling Day events offered to residents three times per year by Recology. Implementation of the referenced strategies, programs and plans, as well as the Cupertino CAP that was adopted in January 2015, will enable the City to meet the 75 percent solid waste diversion rate by the year 2020. In December 2017, the City adopted a

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[120] (4.1 PPD x 70 employees = 287 PPD) + (3.6 PPD x 695 residents = 2,502 PPD) = 2,789 PPD.

[121] 85 percent of 71,250 square feet (about 60,563 square feet) of retail/ by 450 square feet per employee = 135 employees.

[122] 4.1 PPD x 135 employees = 533.5 PPD.

[123] CalRecycle. 2017. Disposal Rate Calculator. https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting /DisposalRate Calculator, accessed June 12,, 2019.

[124] City of Cupertino, Public Works. 1992. Source Reduction and Recycling Element, September 21, 1992.

[125] City of Cupertino, Public Works. 1992. Household Hazardous Waste Element, September 21, 1992.

[126] Cupertino Municipal Code, Title 9, Health and Sanitation, Chapter 9.6, Solid Waste, Non-Organic Recycling and Recycling Areas, Section 9.16.010(a), Purpose.

Zero Waste Policy.[127] According to the Zero Waste Policy, the City will require, through the City's waste hauling franchise agreement, steadfast and ongoing efforts by the City's franchisee to maintain a minimum residential and commercial waste diversion rate of 75 percent with a goal of reaching and maintaining 80 percent by 2025. These programs will be sufficient to ensure that future development in Cupertino, including the proposed project, would not compromise the ability to meet or perform better than the State mandated target. Additionally, construction and any demolition debris associated with the project would be subject to CMC Chapter 16.72, requiring that a minimum of 65 percent of C&D debris be diverted from landfill.[128] The City's Zero Waste Policy also requires that all private construction projects that come through the City's permitting process, and all City projects (through contract requirements), to recover and divert at least 65 percent of the construction waste generated by the project. Compliance with applicable statutes and regulations would ensure that the impact would be *less than significant*. This criterion will not be discussed further in the EIR.

XVII. WILDFIRE

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	■
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

GENERAL PLAN EIR

Chapter 4.7, Hazards and Hazardous Materials, of the General Plan EIR, addressed wildfire hazard and impacts are found to be less than significant. Note this section of the Initial Study addresses additional environmental checklist questions regarding wildfire related impacts pursuant to the new CEQA Guidelines that were adopted in December 2018.

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[127] City of Cupertino, Public Works, Garbage & Recycling, https://www.cupertino.org/our-city/departments/environment-sustainability/waste, accessed June 11,, 2019.

[128] Cupertino Municipal Code, Title 16, Buildings and Construction, Chapter 16.72, Recycling and Diversion of Construction and Demolition Waste, Section 16.72.040, Diversion Requirement.

EXISTING CONDITIONS

Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. State Responsibility Areas (SRA) are the areas where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA includes a 31 million-acre area, which the CAL FIRE provides a basic level of wildland fire prevention and protection services. Local Responsibility Areas (LRA) include lands within incorporated cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, or by CAL FIRE under contract to local government.[129] CAL FIRE determines fire hazard zones within the LRA using an extension of the SRA Fire Hazard Severity Zone model as the basis. The LRA hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area.

The California Department of Forestry and Fire Protection (CAL FIRE) designates fire hazard severity zones (FHSZs) as authorized under California Government Code Sections 51175 et seq. CAL FIRE considers many factors such as fire history, existing and potential fuel (natural vegetation), flame length, blowing embers, terrain, and typical weather for the area. There are three types of FHSZs: moderate, high, and very high.

According to California Office of Emergency Services, a Wildland-Urban Interface (WUI) is defined as any area where structures and other human development meet or intermingle within wildland vegetation.[130] Developments in the wildland-urban interface exacerbate fire occurrence and fire spread in several ways, including:

- Increased numbers of human-caused wildfires.
- Wildfires become harder to fight.
- Firefighting resources are diverted from containing the wildfire to protecting lives and homes.
- Letting natural fires burn becomes impossible; leading to buildup of fuel, increasing wildfire hazard further.[131]

The project site is located within an LRA and the SCCFD currently provides fire protection and emergency medical services to the city and project site. The nearest SRA is approximately 2 miles to the northeast and is designated as High FHSZ. The nearest Very High FHSZ within the Cupertino LRA is located approximately 2.5 miles to the south. The project site is not located within the Cupertino designated WUI.[132]

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[129] California Department of Forestry and Fire Prevention (CAL FIRE). Frequently Asked Questions. http://www.fire.ca.gov/firepreventionfee/sra_faqs, accessed June 12,, 2019.

[130] Cal OES. 2018. California State Hazard Mitigation Plan.

[131] Radeloff, Volker; Helmers, David; Kramer, H., et al. 2018. Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk. Proceedings of the National Academy of Sciences (PNAS): Volume 115 No. 13. https://www.pnas.org/content/pnas/115/13/3314.full.pdf, accessed on June 12, 2019.

[132] Cupertino Municipal Code, Section 16.74, Wildland Urban Interface Fire Area.

DISCUSSION

The project site is not located in or near SRAs or lands classified as high fire hazard severity zones; therefore, *no impact* would occur. This issue will not be discussed further in the EIR.

See Section VII, Hazards and Hazardous Materials, for a discussion of the project's potential to conflict with an adopted emergency response plan or emergency evacuation plan, and expose people and structures to a significant loss, injury or death involving wildfires.

See Section VIII, Hydrology and Water Quality, for additional discussion on the project's potential to alter the existing drainage pattern.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	☐	☐	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	☐	☐	☐

DISCUSSION

a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

As described above, the project site is in an urbanized, extensively developed area of Cupertino. The project site is currently almost entirely built out with commercial development and associated surface parking. There are no sensitive natural communities, no areas of sensitive habitat, and no areas of critical habitat occurring at the project site. Additionally, there are no buildings currently listed or eligible for listing on the California Register of Historical Resources, no recorded archaeological sites, and no known paleontological resources located on the project site. The project site does, however, have green space and protected trees within and surrounding the on-site buildings, which will be mostly removed as part of the proposed project. The proposed project would be required to comply with the City's Protected Tree Ordinance (CMC Chapter 14.12), which requirements for the protection, preservation, and maintenance of certain trees as a condition of approval. Therefore, this would be considered a *less-than-significant* impact.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

CEQA Guidelines Section 15355 defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant projects taking place over a period of time. CEQA Guidelines Section 15130(b) advises that a discussion of cumulative impacts should reflect both the severity of the impacts and the likelihood of their occurrence. To accomplish these two objectives, CEQA Guidelines Section 15130 permits two different methodologies for completion of a cumulative impact analysis and allows for a reasonable combination of the two approaches:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city; and
- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

Table 2 shows the other reasonably foreseeable projects in Cupertino and how they relate to the maximum buildout potential evaluated in the General Plan EIR.

TABLE 2 REASONABLY FORESEEABLE DEVELOPMENT PROJECTS IN CUPERTINO

	Hotel	Residential	Commercial	Office
General Plan EIR: Maximum Development Potential	1,339	4,421	1,343,679	4,040,231
Reasonably Foreseeable Projects				
Foothill Apartments[a]		*15*		
Marina Plaza[a]	*122*	*188*	*23,000*	
The Hamptons Redevelopment[a]		*600*		
The Forum[a]		*23*		
De Anza Hotel[b]	*156*			

The Village Hotel[b]	*185*			
Public Storage[a, d]			*209,485*	
Loc-N-Stor[b,d]			*96,432*	
Canyon Crossings[b]		*18*	*4,536*	
Vallco[a,c]		*2,402*	*400,000*	*1,810,000*
Total Foreseeable Development	***463***	***3,219***	***748,917***	***1,810,000***
General Plan EIR: Remaining Development Potential	**876**	**1,202**	**594,762**	**2,230,231**

Notes:
a. The project has been approved.
b. The project is under review.
c. The buildout numbers are for the Vallco SB 35 Application (0 hotel rooms, 2,402 units, 1,810,000 square feet commercial, and 400,000 square feet commercial).
d. The storage facility sites currently have existing storage facilities and the square footage shown in this table is the net new.
Source: City of Cupertino, 2019.

The General Plan EIR evaluated the cumulative effects of the General Plan Amendments, Housing Element Update, and Associated Rezoning using the summary of projections approach provided for in CEQA Guidelines Section 15130(b)(1)(B). The General Plan EIR took into account growth from the General Plan within the Cupertino city boundary and Sphere of Influence (SOI), in combination with projected growth in the rest of Santa Clara County and the surrounding region, as forecast by ABAG.

As provided for by CEQA Guidelines Section 15130, the cumulative context considered in the General Plan EIR varies, depending on the nature of the issue being studied, to best assess the geographic extent of each issue. For example, the cumulative impacts on water and air quality can be best analyzed within the boundaries of the affected resources, such as water bodies and air basins. For other cumulative impacts, such as hazard risks, traffic, and the need for new public service facilities, the cumulative impact is best analyzed within the context of the population growth and associated development that are expected to occur in the region or the public service providers' jurisdiction.

The General Plan EIR included an assessment of the redevelopment of the project site with 235residential projects. As shown in Table 2, the project (242 units and 20,000 square feet of commercial uses) when combined with the other reasonably foreseeable projects in Cupertino would not exceed the maximum buildout potential evaluated in the General Plan EIR. The impact discussions in Section I through Section XVII, above describes the proposed projects relationship to and consistency with the scope of development, land use designations, population projections, and cumulative impacts analyses contained in the General Plan EIR. As shown, the project's cumulative impacts were determined to be less than significant or less than significant with mitigation in the cumulative context.

Since the certification of the General Plan EIR, the City has considered new development at the Vallco project site. While, as shown in Table 2, this development at the Vallco site is consistent with the maximum buildout potential in the General Plan EIR for citywide cumulative discussions (e.g., population and housing, water supply, etc.), the General Plan EIR did not evaluate localized cumulative impacts, such as traffic, traffic related noise, and utilities infrastructure, for the vicinity of the project site. Due to the distance between the proposed Westport Mixed-Use Project and the projects listed in Table 2, no localized cumulative impacts related traffic, noise, or utilities would occur.

As described in the environmental checklist, air quality, biological resources, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, noise, transportation, tribal cultural resources, and utilities (wastewater) impacts of the proposed project may be *potentially significant* until the need and nature of any required mitigation has been identified as part of the EIR. Therefore, the proposed project could contribute to significant cumulative impacts in these topic areas when considered along with other reasonably foreseeable projects in the area. This will be discussed in the EIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed previously, the proposed project may have a *potentially significant* impact on the environment until the need and nature of any required mitigation has been identified as part of the EIR.

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APPENDIX B:
NOTICE OF PREPARATION AND SCOPING COMMENTS

Notice of Preparation of an Environmental Impact Report
City of Cupertino

Date: JULY 11, 2019

To:	State Clearinghouse State Responsible Agencies State Trustee Agencies Other Public Agencies Interested Organizations	**From:**	Gian Martire, Associate Planner City of Cupertino Community Development Department 10300 Torre Avenue Cupertino, CA 95014

Subject: **Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Westport Mixed-Use Project**
Lead Agency: City of Cupertino Community Development Department
Project Title: Westport Mixed-Use Project
Project Applicant: Mark Tersini, KT Urban
Project Location: 21267 Stevens Creek Boulevard, Cupertino, California (see Figure 1)

Notice is hereby given that the City of Cupertino (City) will be the Lead Agency and will prepare a project-level EIR for the Westport Mixed-Use Project (proposed project) pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code sections 21000 et seq.) and the CEQA Guidelines (Title 14, section 15000 et seq. of the California Code of Regulations). This Notice of Preparation (NOP) has been prepared in compliance with CEQA Guidelines section 15082. The purpose of this NOP is to solicit comments from public agencies and the public on the scope and content of the EIR for the project.

The City has determined that a Draft EIR will be prepared for the Westport Mixed-Use Project. An EIR is a detailed statement prepared under CEQA describing and analyzing the significant environmental effects of a project. For any identified potentially significant environmental impacts, the EIR will identify mitigation measures to avoid or reduce those impacts, as feasible. The EIR also will discuss a reasonable range of alternatives to the project that could reasonably attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant environmental effects of the project (CEQA Guidelines section 15126.6(a)).

The City is requesting comments on the scope and content of the EIR from public agencies and the public. The City would like to know the views of your agency as to the scope and content of the environmental information germane to your agency's statutory responsibilities in connection with the proposed project.

You are encouraged to email your comments to GianM@cupertino.org with "Westport Mixed-Use Project EIR" as the subject. As an alternative, you may submit written comments to the following address:

City of Cupertino, Community Development Department
Attention: Gian Martire, Associate Planner
10300 Torre Avenue
Cupertino, CA 95014

If you submit comments on the scope and content of the EIR, you will automatically be added to the City's distribution list for future notices and information about the environmental review process for the project. If you do not wish to submit comments on the scope of the EIR, but would like to receive updates on the project, please submit your mailing address to receive mailed notices.

A **Public EIR Scoping Meeting** will be held to receive comments regarding the scope and content of the EIR on **Thursday, July 18, 2019** from **6:30 to 8:30 p.m.** at the **Cupertino Community Hall** (10350 Torre Avenue). Due to the time limits mandated by state law, your comments on the NOP are due no later than the close of the 30-day review period at 4:30 p.m. on **Friday, August 9, 2019**.

The proposed project, its location, and potential effects are described on the following pages.

Introduction

The purpose of an Environmental Impact Report (EIR) is to inform decision makers and the public of the significant environmental effects of a proposed project. The EIR process is intended to provide environmental information sufficient to evaluate a project and its potential for significant effects on the environment; discuss methods of reducing or avoiding adverse environmental impacts; and consider alternatives to the project. Prior to taking any action on the proposed Westport Mixed-Use Project, the City Council must, at a public hearing, certify that the EIR has been completed in compliance with CEQA, and reflects the independent judgment of the City.

Project Location

The 8.1-acre project site it the existing Oaks Shopping Center on Stevens Creek Boulevard. The project site includes several street addresses; therefore, the centrally located 21267 Stevens Creek Boulevard location is used to identify the site.[1] . As shown on Figure 1, the project site is located in the central portion of Cupertino. Regional access to the project site is provided by Interstate 280 (I-280), State Route 85 (SR-85), Stevens Creek Boulevard, Santa Clara Valley Transportation Authority (VTA) bus service, and Caltrain via the Sunnyvale, Lawrence, and Santa Clara Caltrain Stations. The project site is bounded by Mary Avenue to the north and east, Stevens Creek Boulevard to the south, and a SR-85 on-ramp to the west as shown in Figure 2. The project site is surrounded by residential land uses to the north (Glenbrook Apartments), the Cupertino Senior Center and Cupertino Memorial Park to the east, De Anza College to the south, and residential and industrial land uses to the west beyond SR-85.

The project site is accessible from Stevens Creek Boulevard and Mary Avenue. The closest VTA bus stop (Line 81) is located at the Mary Avenue/Stevens Creek Boulevard intersection, approximately 200 feet east of the site. Bus stops are also located at De Anza College (approximately 1,900 feet to the east at the intersection of Stevens Creek Boulevard and South Stelling Road).

Background

The project site is identified as a Priority Housing Element Site in the City of Cupertino General Plan (Community Vision 2015-2040) to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 to 2022 planning period and meet Cupertino’s fair-share housing obligation of 1,064 units. The City certified the Environmental Impact Report (EIR) for the General Plan Amendment, Housing Element Update, and associated Rezoning Project, which included an evaluation of the project site with a new mixed-use development including residential use that could have up to 235 net residential units. The EIR evaluated a maximum height of 75 feet with a retail component and a permitted residential density of up to 35 dwelling units per acre and a Zoning designation change to Planned Development with General Commercial, Residential (P(CG, Res)) to allow for future mixed-use development including residential uses.

Project Description

As shown on Figure 2, the project site is currently developed with five occupied buildings totaling 71,254 square feet (The Oaks Shopping Center). The shopping center includes 53,701 square feet of retail stores and restaurants, and 17,503 square feet of office uses. The project site also has 201,831 square feet of paved area, which includes parking associated with the shopping center, sidewalks, patios, and driveways, and 45,486 square feet of native and non-native landscaping.

The proposed project would involve the demolition of the existing buildings and the construction of 242 residential units and up to 20,000 square feet of commercial space. The project would consist of a total of 18 buildings: 16 buildings with multi-family dwelling units, one building with retail and senior and below market rate housing, and one building with retail and market rate dwelling units. Open space would consist of 37,601 square feet of common open space, 29,068 square feet of common landscape space, 11,371 square feet of common hardscape space, and 2,400 square feet of common retail

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[1] Multiple street addresses on Stevens Creek Boulevard are associated with the project site, including 21255, 21265, 21267, 21269, and 21271.

outdoor space. The proposed project would include two new internally accessible roadways for emergency vehicles as well as for the new residential units, and minor changes to the existing internal on-site circulation system.

Following approval of the EIR by the City Council, the following discretionary permits and approvals from the City would be required for the proposed project: Development Permit, Architectural and Site Approval Permit, and a Tree Removal Permit. In addition, permits for demolition, grading, and building, in addition to a certificate of occupancy, would be required from the City.

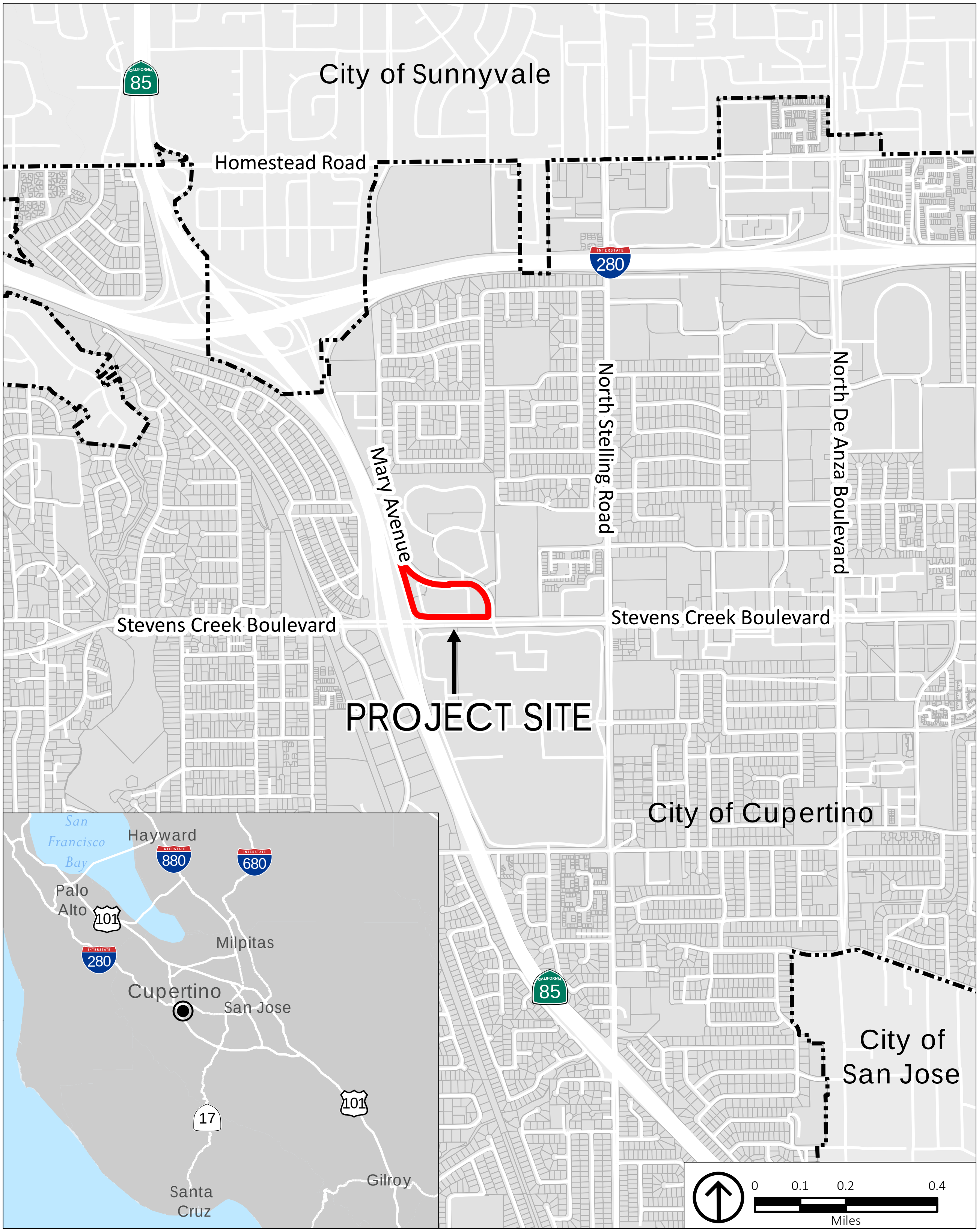
Probable Environmental Effects of the Project

An Initial Study was prepared pursuant to CEQA and the CEQA Guidelines. The Initial Study is available for review at the City's website at (www.cupertino.org/westport) and at the Community Development Department counter.

As shown in the Initial Study, the potential environmental effects of the project in the environmental topic areas listed below will be analyzed in the EIR. For the remaining environmental topic areas, the Initial Study concluded that the impacts would be less than significant.

- **Air Quality**. The EIR will describe the regional air quality conditions of the San Francisco Bay Area and will evaluate air quality impacts to and from the project, in conformance with the criteria identified by the Bay Area Air Quality Management District. The project's consistency with 2017 Bay Area Clean Air Plan will also be discussed.
- **Biological Resources.** Given the urban and developed nature of the project site, the primary biological resources on-site are existing trees. The EIR will evaluate the project's impact on biological resources, such as removal of trees and impacts on nesting birds that may be present.
- **Cultural Resources.** Archeological resources could be present on the project site. The EIR will evaluate the potential for the project to impact historic resources that could be unearthed during project construction.
- **Geology and Soils.** Paleontological resources could be present on the project site. The EIR will evaluate the potential for the project to impact pre-historic resources that could be unearthed during project construction.
- **Greenhouse Gas Emissions.** The EIR will discuss the project's consistency and conformance with applicable plans, policies, and/or regulations adopted for the purpose of reducing greenhouse gas emissions, including the City's Climate Action Plan, and assess whether the project's greenhouse gas emission would have a significant impact on the environment.
- **Hazards and Hazardous Materials.** The EIR will evaluate the impacts to nearby sensitive receptors with respect to hazardous materials.
- **Noise.** The principal noise sources in the project area are traffic noise from I-280. The EIR will describe the existing noise conditions in the project area and will address noise and vibration impacts from the project, including those generated from project traffic and project demolition and construction activities.
- **Transportation.** The EIR will describe the existing transportation network serving the project site and will evaluate the transportation impacts resulting from the proposed project.
- **Tribal Cultural Resources.** No known tribal cultural resources are located on the project site; however, the potential to unearth unknown remains during ground disturbing activities associated with the construction of the project could occur. The EIR will evaluate the potential for the project to impact sites, features, places, or cultural landscaped with cultural value to a California Native American Tribe.
- **Utilities and Service Systems.** Impact related to wastewater treatment capacity may be potentially significant. The EIR will describe the existing conditions related to wastewater treatment and address the ability and capacity of the existing utilities to serve the project and will describe any utility improvements proposed by the project.

Attachments:
Figure 1 Regional and Vicinity Map
Figure 2 Aerial Photograph of the Project Site



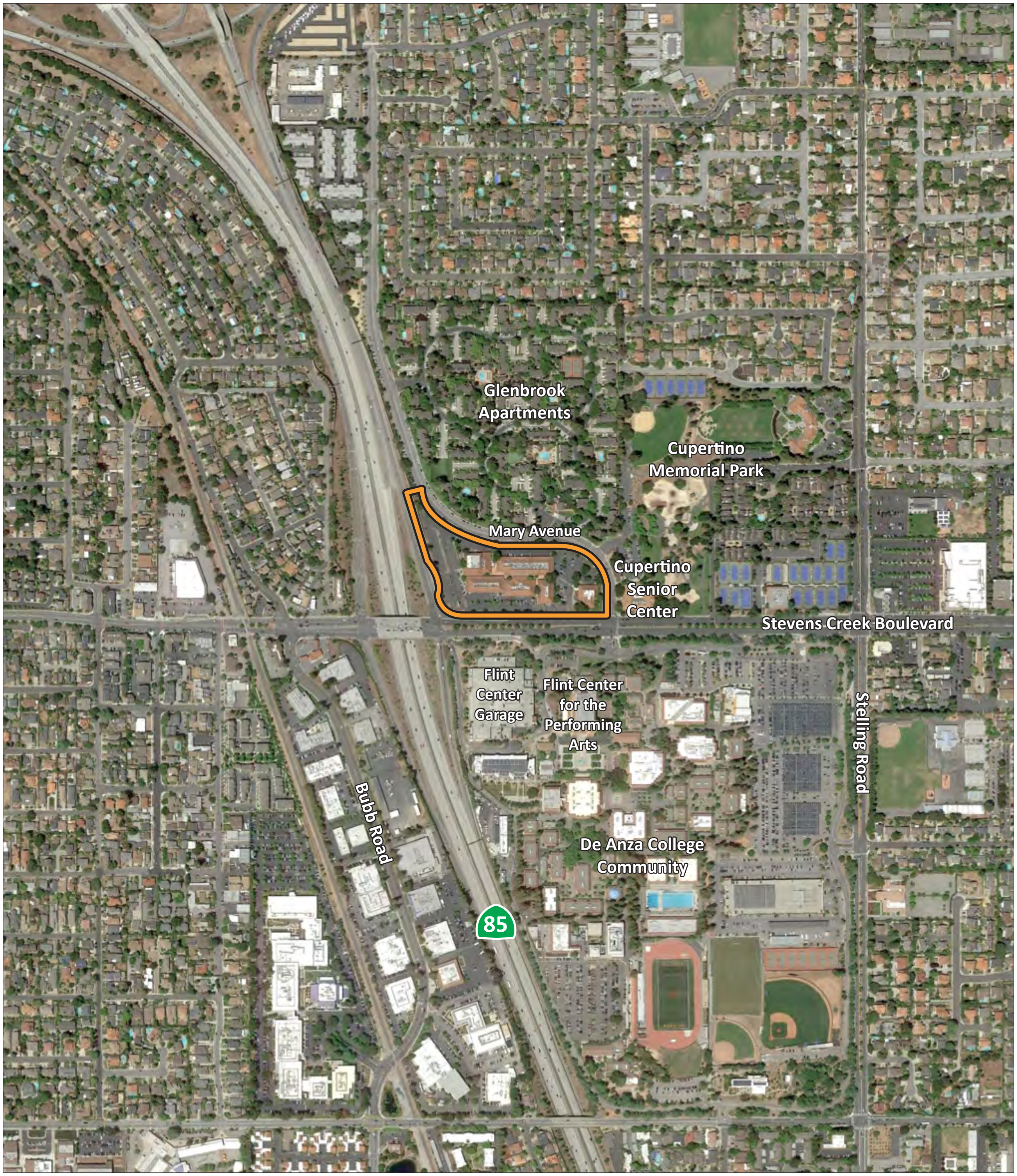
Source: ESRI, 2017; PlaceWorks, 2019.

🟥 Project Site

▭ Cupertino City Limit

Figure 1

Regional and Vicinity Map



Source: Google Earth Professional, 2018; PlaceWorks, 2018.

Figure 2
Aerial View of Project Site

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Comments Received on the Notice of Preparation Westport Mixed-Use Project Environmental Impact Report

#	COMMENTER	Project Description	Aesthetics	Agriculture and Forestry	Air Quality	Biological Resources	Cultural / Tribal Cultural Resources	Geology / Soils	Greenhouse Gas Emissions	Hazards / Hazardous Materials / Wildfire	Hydrology / Water Quality	Land Use and Planning	Mineral Resources	Noise	Population / Housing	Public Services	Recreation	Transportation / Circulation	Utilities / Service Systems / Energy	Construction Impacts	Alternatives	Other	Requests to be Notified	SUMMARY OF ENVIRONMENTAL COMMENT
Written Comments Prior to Thursday, July 18, 2019 Scoping Meeting																								
1	Jean Marlowe jean@jeanmarlowe.com March 4, 2019																						●	Requests to be on notification list.
2	John Bai johngbai99@gmail.com July 9, 2019																						●	Voices opposition to project. Expresses concern that Highway 85 is already too crowded.
Verbal Comments from the Thursday, July 18, 2019 Scoping Meeting																								
Various commenters			●		●	●			●			●		●		●		●	●		●	●		Concerned about increased traffic, car idling, existing parking, spill-over parking into adjacent neighborhoods, operational and construction noise, lighting, public safety, existing unprotected left turns that take several light cycles to get through, unsafe for seniors and students to cross busy intersection, Oaks need to be replaced with established trees, bird safe design, compliance with City's Night Sky Ordinance underway.

Comments Received on the Notice of Preparation Westport Mixed-Use Project Environmental Impact Report

#	COMMENTER	Project Description	Aesthetics	Agriculture and Forestry	Air Quality	Biological Resources	Cultural / Tribal Cultural Resources	Geology / Soils	Greenhouse Gas Emissions	Hazards / Hazardous Materials / Wildfire	Hydrology / Water Quality	Land Use and Planning	Mineral Resources	Noise	Population / Housing	Public Services	Recreation	Transportation / Circulation	Utilities / Service Systems / Energy	Construction Impacts	Alternatives	Other	Requests to be Notified	SUMMARY OF ENVIRONMENTAL COMMENT
Written Comments Received at the Thursday, July 18, 2019 Scoping Meeting																								
1	Connie Cunningham ccunningham@cupertino.org July 18, 2019																	●				●		Requests that bicycle and pedestrian paths along Stevens Creek and Mary Avenue be consistent and asks if a bridge to De Anza College and the Senior Center can be built by the developer.
2	Hurnien Hsiu dehsiu@gmail.com July 18, 2019																	●				●		Voices concern of increased traffic congestion on Highway 85 and Stevens Creek Boulevard
3	Margaret Kopf ladybank@att.net July 18, 2019																	●				●		Voices concern for the proposed height, tenant parking, loss of mature trees. Requests name keep "The Oaks" in the title. Curious about the cost of the apartments.
Written Comment Received between Thursday, July 11, 2019 and Wednesday, October 16, 2019																								
1	Harris Au harrisau1@gmail.com July 11, 2019				●									●				●			●	●		States the project has too many residential units and expresses concern for subsequent traffic, noise, and air quality impacts. Requests a reduced project; 40 housing units and15,000 square feet of retail for supermarkets, fitness centers, and restaurants etc. Suggests a public vote for the project.
2	Gang Shen and Yun Fan fy9297@yahoo.com July 12, 2019															●		●			●			Voices concern of increased traffic congestion
3	Varouj baghdasarian baghdasarianv@yahoo.com July 16, 2019															●		●			●			Expresses concern of crowded schools and increased traffic. Suggests alternatives to housing is to keep commercial land use on the site.

Comments Received on the Notice of Preparation Westport Mixed-Use Project Environmental Impact Report

#	COMMENTER	Project Description	Aesthetics	Agriculture and Forestry	Air Quality	Biological Resources	Cultural / Tribal Cultural Resources	Geology / Soils	Greenhouse Gas Emissions	Hazards / Hazardous Materials / Wildfire	Hydrology / Water Quality	Land Use and Planning	Mineral Resources	Noise	Population / Housing	Public Services	Recreation	Transportation / Circulation	Utilities / Service Systems / Energy	Construction Impacts	Alternatives	Other	Requests to be Notified	SUMMARY OF ENVIRONMENTAL COMMENT
4	Sylvia Baghdasarian sylvia.baghdasarian@lmco.com July 17, 2019															•		•			•			Expresses concern of crowded schools and increased traffic. Suggests alternatives to housing is to keep commercial land use on the site.
5	Albert Young ayoungs1@sbcglobal.net July 18, 2019																	•				•		Voices concern of increased traffic congestion on Highway 85 and Stevens Creek Boulevard. Expressed opposition to high density residential.
6	Fatima Yu fayu02@yahoo.com July 18, 2019				•													•				•		Voices concern of increased traffic congestion on Highway 85 entrance and exit, air quality impacts, loss of trees. Suggests a reduced alternative and increased green spaces.
7	Marty Zankich martyzankich@hotmail.com July 18, 2019				•													•				•		Voices concern of increased traffic congestion on Stevens Creek Boulevard. Expresses support for housing and retail; opposed to office and hotel uses.
8	Gayle Totton Native American Heritage Commission Gayle.Totton@nahc.ca.gov July 23, 2019						•																	Requests compliance with Assembly Bill 52 and Senate Bill 18 for tribal consultation. Recommends a Cultural Resources Assessment.
9	Wahida Rashid California Department of Transportation August 12, 2019																	•				•		Requests inclusion of items in the travel demand analysis and consideration of multi-modal planning, vehicle trip reduction, and landscaping in the Caltrans' right-of-way and general compliance with Caltrans requirements.
10	Lola Tomey Santa Clara VTA October 16, 2019																	•						Provided comments on transit, pedestrian and bike accommodations, and State Route 85 improvements.

Comments Received on the Notice of Preparation Westport Mixed-Use Project Environmental Impact Report

#	COMMENTER	Project Description	Aesthetics	Agriculture and Forestry	Air Quality	Biological Resources	Cultural / Tribal Cultural Resources	Geology / Soils	Greenhouse Gas Emissions	Hazards / Hazardous Materials / Wildfire	Hydrology / Water Quality	Land Use and Planning	Mineral Resources	Noise	Population / Housing	Public Services	Recreation	Transportation / Circulation	Utilities / Service Systems / Energy	Construction Impacts	Alternatives	Other	Requests to be Notified	SUMMARY OF ENVIRONMENTAL COMMENT
Notes: This matrix provides a summary of the comments made on the scope of the environmental impacts to be analyzed. A complete copy of the comments submitted by the commenter has been included in Appendix B of the Draft EIR.																								

From: Jean Marlowe
To: Gian Martire
Cc: jean@jeanmarlowe.com
Subject: Westport Cupertino
Date: Monday, March 04, 2019 1:39:16 PM

Hi,

I was wondering what the status was of Westport Cupertino? Could you please put me on your list when there is a neighborhood community meeting?

thanks,

Jean Marlowe

From: JG Bai
To: Gian Martire
Subject: Westport EIR
Date: Tuesday, July 09, 2019 7:32:06 PM

Hi Gian,

Thanks for noticing us on the Westport Cupertino project development!

We are against the Westport Cupertino development project since the Highway 85 is already too crowded.

Best,
John

CITY OF
CUPERTINO

The Westport Mixed-Use Project
Public Scoping Meeting Comment Card

Cupertino Community Hall (10300 Torre Avenue)
Thursday, July 18, 2019

Please fill out this card with any comments you have on issues the Environmental Impact Report (EIR) should address.

NAME: Connie Cunningham **PHONE (OPTIONAL):** 408-446-1793

ADDRESS: Milky Way **EMAIL:** ccunningham@cupertino.org

COMMENTS:

Remember to check the Bicycle/Pedestrian Paths along Stevens Creek / Mary Avenue to be consistent.

Can City work with developer to create bridge ways to DeAnza College & also to Senior Center.

Comments are due no later than the close of the 30-day review period at 5:00 p.m. on Friday, August 9, 2019.
Please leave your comment card before leaving tonight's scoping meeting or send your written comments to Gian Martire, City of Cupertino, 10300 Torre Avenue, Cupertino, CA 95014 or email to GianM@cupertino.org with "The Westport Mixed-Use Project EIR" as the subject.

For more information visit:
http://www.cupertino.org

CITY OF
CUPERTINO

The Westport Mixed-Use Project
Public Scoping Meeting Comment Card

Cupertino Community Hall (10300 Torre Avenue)
Thursday, July 18, 2019

Please fill out this card with any comments you have on issues the Environmental Impact Report (EIR) should address.

NAME: Hurnien Hsiu

PHONE (OPTIONAL):

ADDRESS: 21620 Fitzgerald

EMAIL: dehsiu@gmail.com

COMMENTS: There are so many traffic lights and so many different entraces to the steven creek Blvd & the highway 85. Especially, when the de Anza college and Apple offices are expanding, the traffic are already bad enough.

With the New project, we expected will be even worst and high way entrace will be added.

Please quantify the New development's impact to the Already congested traffic.

Comments are due no later than the close of the 30-day review period at 5:00 p.m. on Friday, August 9, 2019.
Please leave your comment card before leaving tonight's scoping meeting or send your written comments to Gian Martire, City of Cupertino, 10300 Torre Avenue, Cupertino, CA 95014 or email to GianM@cupertino.org with "The Westport Mixed-Use Project EIR" as the subject.

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http://www.cupertino.org

CITY OF CUPERTINO

The Westport Mixed-Use Project
Public Scoping Meeting Comment Card

Cupertino Community Hall (10300 Torre Avenue)
Thursday, July 18, 2019

Please fill out this card with any comments you have on issues the Environmental Impact Report (EIR) should address.

NAME: Margaret Kapf **PHONE (OPTIONAL):**

ADDRESS: 21850 San Fernando Ave **EMAIL:** Ladybank@att.net

COMMENTS:

1. Too tall for the neighborhood
2. With the additional housing, where will the tenants park?
3. Don't like the loss of mature trees. This area of Cupertino is "park-like", not naked commercial.
4. hate the loss of the Oaks name. How about Wesport at the Oaks or the Oaks at Westport?
5. What is expected cost of apartments?

<u>Comments are due no later than the close of the 30-day review period at 5:00 p.m. on Friday, August 9, 2019.</u>
Please leave your comment card before leaving tonight's scoping meeting or send your written comments to Gian Martire, City of Cupertino, 10300 Torre Avenue, Cupertino, CA 95014 or email to GianM@cupertino.org with "The Westport Mixed-Use Project EIR" as the subject.

For more information visit:
http://www.cupertino.org

From: Harris Au
To: Gian Martire
Cc: harrisau1@gmail.com
Subject: Westpoint EIR, The Westport Cupertino Project Development, My Comments
Date: Thursday, July 11, 2019 4:45:59 PM

Dear Sir/Madam,

The plan has way too many residential units. The traffic congestion and environmental detriments (noise and air etc) will be unbearable. Even today it is obvious how slow the traffic is in weekday work hours (8 am and 5 pm) at Steven’s Creek Blvd/HWY 85/Hwy 280.

The current proposal of 242 housing units, 20,000 square feet of retail space should be reduced. It probably makes sense to have no more than 40 housing units and 15,000 square feet of retail for supermarkets, fitness centers, and restaurants etc.

Please don’t rush the plan and leave the city to bear the consequences. Place the plan for public voting if necessary.

Sincerely,

Harris Au
10393 Noel Ave
Cupertino, CA 95014

From: YF
To: Gian Martire
Subject: Westport EIR
Date: Friday, July 12, 2019 9:47:03 AM

Hi! Dear Mr. Gian Martire,

We got a notice for the project of Westport Cupertino Development.

We remember that there was a similar project which was rejected by the people lived here years ago.

This time, the same project is put on table again.

We are maybe not able to attend the meeting on 7/18, so here give our opinion.

We oppose this project because this area is already crowded with traffic, I remembered in early this year I sent my son to school, Monte Vista High School, we set off 25 minutes before school, but due to traffic my was later, the distance from my home to the school is only 1.5 miles! If this project finished, we can not image how bad the traffic here is.

Thank you for considering our opinion.

Gang Shen and Yun Fan

10389 Mary Ave
Cupertino CA 95014

Gian Martire

To: varouj baghdasarian
Subject: RE: Westport EIR

Hi Varouj,

Thank you for the email. I will include this in the file.

Gian Martire
Associate Planner
Planning Division
GianM@cupertino.org
(408) 777-3319

From: varouj baghdasarian <baghdasarianv@yahoo.com>
Sent: Tuesday, July 16, 2019 9:35 AM
To: Gian Martire <GianM@cupertino.org>
Cc: varouj baghdasarian <baghdasarianv@yahoo.com>
Subject: Westport EIR

Date: July 16, 2019

To: City of Cupertino Planning

Subject: Westport Project

Oaks property is one of the most commercially viable shopping center location in the entire Cupertino. If Cupertino wants to attract businesses and shops, this would be the location to offer. Turning Oaks property into residential would be the worst re-zoning City can do. As is, Cupertino is a bedroom town, residents shop, dine, and get their entertainment elsewhere. Converting the last commercial property into residential is unjustifiable. Cupertino schools are already over-crowded for their own residents, stop allowing developers to exploit Cupertino schools for their own financial gains. Cupertino needs more businesses, more vibrant restaurants and more shopping centers, but not more housing.

Has the City looked at the impact of adding 250 more families along with impact on traffic and schools? This intersection is already a traffic bottleneck, as is you can't even get on 85 for commuting. City should not cater to special interests at the expense of your own residents. Developers will make their money and move on, we are the ones holding the bag. Don't allow developers to manipulate the City planning by calling it "Mixed Use" and/or "Low Income Housing", developer is not paying for Low Income Housing, it's paid by the "High Income Housing".

City wouldn't let me to re-zone of my property from residential to commercial or visa-versa. Oaks is a commercial property and it should stay commercial. This is the last commercially viable property in Cupertino, don't waste it. Re-zoning Oaks to residential is not at the best interest of Cupertino residents, only the developer. Cupertino needs more shopping centers and more businesses, not more bedrooms.

Varouj Baghdasarian, resident.
22757 Stevens Creek Blvd.
Cupertino, CA 95014

Total Control Panel

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To: gianm@cupertino.org
From: baghdasarianv@yahoo.com

Message Score: 10
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Medium (75): Pass
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This message was delivered because the content filter score did not exceed your filter level.

From: Baghdasarian, Sylvia
To: Gian Martire
Subject: Westport EIR
Date: Wednesday, July 17, 2019 1:52:03 PM

Dear City of Cupertino Planning,

The news the city reviewing the application for 250 units at the Oaks was indeed very disturbing news to me and my Cupertino neighbors!

Cupertino is so over populated as is and the schools have reached their max capacity for years and someone comes with the brilliant proposal for more housing!!!!

De Anza college across the street from the Oaks has over 24,000 students coming and going all day and heading east on Stevens Creek the two lanes to get on 85 is a nightmare as is. Adding more residents on that corner is going to bring traffic to a halt!!

I have been residing in Cupertino for over 35 years and it pains me to see what this beautiful city is becoming oversaturated with homes and more homes.

We have no movie theaters no shopping malls but we sure have plenty of multi- family homes and more homes!!!

The oaks will serve the residence well if it was converted to businesses that will attract the college youth and the bright and outstanding students in Cupertino as well the current residence who have to go to neighboring cities for dining and intertainment.

I urge the city of Cupertino to decline any such residential development at the Oaks but instead use the space to improve the city amenities and encourage businesses and generate income.

Don’t take the bait from these multi family tycoons. Their only interest is to generate money for themselves and could care less about the city of Cupertino or its residence.

R,
Sylvia Baghdasarian
22757 Stevens Creek Blvd
Cupertino, Ca 95014

From: Albert Young
To: Gian Martire
Subject: Westport Project causing more traffic interlock
Date: Thursday, July 18, 2019 2:10:35 PM

Dear Gian,
I live in the Monta Vista Area. The interlock traffic between 85 and Steven's Creek is already very bad. If the Westport project doesn't have a plan to alleviate this problem, I would strongly against it.
The area should not have high density residential.
Regards,
Albert

Total Control Panel Login

To: gianm@cupertino.org	Message Score: 1	High (60): Pass
From: ayoungs1@sbcglobal.net	My Spam Blocking Level: Custom	Medium (75): Pass
		Low (90): Pass
	Block this sender	Custom (55): Pass
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This message was delivered because the content filter score did not exceed your filter level.

From: Fatima Yu
To: Gian Martire
Subject: Westport EIR
Date: Thursday, July 18, 2019 2:25:07 PM

I am very much concerned about the future traffic jams at the Highway 85 entrance and exit, as it is already bad during busy hours. Secondly I am very much concerned about degradation in air quality in the Monta Vista neighborhood.

Scale of the development should be reduced to half, in my opinion.

Instead of high rises which look totally incompatible with current surrounding environment, the number of stories need to be reduced to at most 3 levels above ground.

The amount of green space should be increased. Cutting down such a large number of protected trees is bad for our city. On top of this, the exhaust gas of the increased traffic will make the air of our neighborhood really bad.

Our house at Monta Vista area is already dusty. I am really concerned about the air quality worsened by such a large scale project. Green areas should be retained around the homes facing Stevens Creek Blvd and Highway 85. Trees should remain around that corner.

Fatima Yu, Cupertino resident

From: marty
To: Gian Martire
Subject: Oaks/ Westport
Date: Thursday, July 18, 2019 10:17:31 PM

I want to make sure that they address the traffic problems that this many units will cause. I like the idea of housing and retail and no office or hotel. I feel there should be fewer units and not so tall. Make sure there is enough parking for all the units and retail.
I live on Mann Dr and there are times in the morning and evenings that we cannot make a left turn eastbound on Stevens Creek because of the traffic that is backed up on Stevens Creek.
Please keep me posted on any updates on the project.
Thanks, Marty Zankich

Sent from my iPad

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

RECEIVED
JUL 31 2019
By:

July 23, 2019

Gian Martire
City of Cupertino
10300 Torre Avenue
Cupertino, CA 95014

RE: SCH# 2019070377 The Westport Mixed-Use Project, Santa Clara County

Dear Mr. Martire:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
    a. A brief description of the project.
    b. The lead agency contact information.
    c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
    d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
    a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
    a. Alternatives to the project.
    b. Recommended mitigation measures.
    c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
    a. Type of environmental review necessary.
    b. Significance of the tribal cultural resources.
    c. Significance of the project's impacts on tribal cultural resources.
    d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
    a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
    b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
       i. Planning and construction to avoid the resources and protect the cultural and natural context.
       ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
       i. Protecting the cultural character and integrity of the resource.
       ii. Protecting the traditional use of the resource.
       iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    - **a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    - **b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    - **a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    - **b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    - **c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email

address: Gayle.Totton@nahc.ca.gov.

Sincerely,

Nancy Gonzalez

for

Gayle Totton
Associate Governmental Program Analyst

cc: State Clearinghouse

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF TRANSIT AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
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www.dot.ca.gov

Making Conservation
a California Way of Life.

August 12, 2019

SCH # 2019070377
GTS # 04-SCL-2019-00612
GTS ID: 16395
Co-Rt-Pm: SCL-85-17.71

Gian Martire, Associate Planner
City of Cupertino, Community Development Department
10300 Torre Avenue
Cupertino, CA 95014

Project – Westport Mixed-Use Project Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)

Dear Gian Martire:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for this project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans' mission signals our continuing approach to evaluate and mitigate impacts to the State's multimodal transportation network. Caltrans' Strategic Management Plan 2015-2020 aims, in part, to reduce Vehicle Miles Traveled (VMT) and Greenhouse Gas emissions (GHG) in alignment with state goals and policies. Our comments are based on the July 11, 2019 NOP.

Project Understanding

The proposed project would involve the demolition of the existing buildings and the construction of 242 residential units and up to 20,000 square feet (sf) of commercial space. The project would consist of a total of 18 buildings: 16 buildings with multi-family dwelling units, one building with retail and senior and below market rate housing, and one building with retail and market rate dwelling units. Open space would consist of 37,601 sf of common open space, 29,068 sf of common landscape space, 11,371 sf of common hardscape space, and 2,400 sf of common retail outdoor space. The proposed project would include two new internally accessible roadways for emergency vehicles as well as for the new residential units, and minor changes to the existing internal on-site circulation system. Regional access is provided via State Route (SR)-85 and is directly adjacent to this network.

Travel Demand Analysis
Please submit a travel demand analysis that provides VMT analysis resulting from the proposed project. With the enactment of Senate Bill (SB) 743, Caltrans is focusing on transportation infrastructure that supports smart growth and efficient development to ensure alignment with State policies using efficient development patterns, innovative travel demand reduction strategies, multimodal improvements, and VMT as the primary transportation impact metric. Please ensure that the travel demand analysis includes:

- A vicinity map, regional location map, and site plan clearly showing project access in relation to the State Transportation Network (STN.) Ingress and egress for all project components should be clearly identified. Clearly identify the State right-of-way (ROW.) Project driveways, local roads and intersections, car/bike parking, and transit facilities should be mapped.

- A VMT analysis pursuant to the City of Cupertino's guidelines or, if the City has no guidelines, the Office of Planning and Research's Draft Guidelines. Projects that result in automobile VMT per capita greater than 15% below existing (i.e. baseline) city-wide or regional values for similar land use types may indicate a significant impact. If necessary, mitigation for increasing VMT should be identified. Mitigation should support the use of transit and active transportation modes. Potential mitigation measures that include the requirements of other agencies such as Caltrans are fully enforceable through permit conditions, agreements, or other legally-binding instruments under the control of the City.

- A schematic illustration of walking, biking and auto conditions at the project site and study area roadways. Potential safety issues for all road users should be identified and fully mitigated.

- The project's primary and secondary effects on pedestrians, bicycles, travelers with disabilities and transit performance should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access to pedestrians, bicycle, and transit facilities must be maintained.

- Analysis of the impacts of transportation network companies (TNCs) such as Uber and Lyft on VMT, and ways to mitigate these impacts.

- Clarification of the intensity of events/receptions to be held at the location and how the associated travel demand and VMT will be mitigated.

With respect to the local and regional roadway system, provide project related trip generation, distribution, and assignment estimates. To ensure that queue formation does not create traffic conflicts, the project-generated trips should be added to the existing and future scenario traffic volumes for the freeway segments and ramps listed below. Potential queuing issues should be evaluated including on-ramp storage capacity and analysis of freeway segments near the project; turning movements should also be evaluated. In conducting these evaluations, it is necessary to use demand volumes rather than output volumes or constrained flow volume.

Freeway segments:
- I-280 - from Foothill Boulevard to De Anza Boulevard on both directions;
- SR-85 - from Homestead Road to De Anza Boulevard on both directions.

Ramps:
- I-280 - on- and off-ramps at Foothill Boulevard and De Anza Boulevard;
- SR-85 - on- and off-ramps at Homestead Road, Stevens Creek Boulevard, and De Anza Boulevard.

Multimodal Planning

The project's primary and secondary effects on pedestrians, bicyclists, travelers with disabilities, and transit users should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access for pedestrians and bicyclists to transit facilities must be maintained.

Vehicle Trip Reduction

From Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, the project site is identified as **Place Type 2b: Close-in Corridors** where location efficiency factors, such as community design, are moderate and regional accessibility is strong. Given the place type and size of the project, it should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions. Such measures are critical to facilitating efficient site access. The measures listed below will promote smart mobility and reduce regional VMT.

- Project design to encourage walking, bicycling and transit access;
- Transit and trip planning resources such as a commute information kiosk;
- Real-time transit information system;
- Ten percent vehicle parking reductions;
- Charging stations and designated parking spaces for electric vehicles;
- Carpool and clean-fuel parking spaces;
- Designated parking spaces for a car share program;

- Unbundled parking;
- Showers, changing rooms and clothing lockers for employees that commute via active transportation;
- Emergency Ride Home program;
- Secured bicycle storage facilities;
- Fix-it bicycle repair station(s);
- Bicycle route mapping resources;
- Participation/Formation in/of a Transportation Management Association (TMA) in partnership with other developments in the area; and
- Aggressive trip reduction targets with Lead Agency monitoring and enforcement.

Transportation Demand Management programs should be documented with annual monitoring reports by an onsite TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets. Also, reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on State facilities. These smart growth approaches are consistent with the MTC's Regional Transportation Plan/SCS goals and would meet Caltrans Strategic Management Plan sustainability goals.

For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). The reference is available online at: http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

Landscaping

This project proposes an increased density and height of structures, and decreased setback from property lines. Additionally, this project proposes removal of existing trees within the Caltrans' ROW and along the property perimeter. Please consider the impact of this visual change.

Tree removal, planting, trimming and landscape maintenance work performed within Caltrans' ROW will require an encroachment permit, per the Encroachment Permit Manual, Chapter 500 and must meet safety, sight distance and setback requirements per the Highway Design Manual, Ch. 900. Additionally, planting within Caltrans' ROW will require a maintenance agreement per Caltrans Highway Planting Policy (see Caltrans Project Development Procedures Manual, Ch. 29).

There are existing trees and shrubs within the planted slope along the onramp and in the planted median along Stevens Creek Blvd. within Caltrans ROW. Note, any planting within state right of way damaged due to construction activities would require replacement per Caltrans Replacement Highway Planting Policy, (see Caltrans Project Development Procedures Manual, Ch. 29).

Lead Agency

As the Lead Agency, the City of Cupertino is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State right-of-way (ROW) requires a Caltrans-issued encroachment permit. To obtain an encroachment permit, a completed encroachment permit application, environmental documentation, six (6) sets of plans clearly indicating the State ROW, and six (6) copies of signed, dated and stamped (include stamp expiration date) traffic control plans must be submitted to: Office of Encroachment Permits, California DOT, District 4, P.O. Box 23660, Oakland, CA 94623-0660. To download the permit application and obtain more information, visit https://dot.ca.gov/programs/traffic-operations/ep/applications.

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Mark Leong at 510-286-1644 or mark.leong@dot.ca.gov.

Sincerely,

for

Wahida Rashid
Acting District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

anta Clara Valley
Transportation
Authority

October 16, 2019

City of Cupertino
Community Development Department
10300 Torre Avenue
Cupertino, CA 95014

Attn Gian Martire
By email gianm@cupertino org

Subject Westport Mixed-Use Project EIR

Dear Gian,

Thank you for the opportunity to review the Westport Mixed-Use Project, containing up to 20,000 square feet of commercial space and 242 residential units VTA believes this project provides a unique opportunity to increase ridership in Cupertino and create a vibrant transit-oriented development along Stevens Creek Boulevard

Stevens Creek Boulevard will be served by VTA Local Bus Route 23 and Rapid Bus Line 523 by the end of 2019 The site enjoys access (within 250 feet) to the bus stops at Stevens Creek Boulevard and Mary Avenue Additionally, the mix of housing and retail uses within the Project, combined with its proximity to De Anza Community College and bicycle improvements along Stevens Creek Boulevard, raises the pedestrian- and bicycle-friendliness of the area and can result in fewer driving trips

VTA has reviewed the Site Plan, dated July 11, 2019 VTA's main comments are

1 Upgrade bicycle facilities along Mary Avenue
2 Upgrade pedestrian beacon across Mary Avenue between Stevens Creek Boulevard and Senior Center entrance to a Rectangular Rapid Flashing Beacon
3 Provide a better connection between the site and the Stevens Creek Boulevard/State Route (SR) 85 intersection
4 Remove the free right-turn ramp/lane on Stevens Creek Boulevard onto SR 85 north

Pedestrian Accommodations

VTA appreciates the improved pedestrian access to the site from the mid-block crosswalk between Stevens Creek Boulevard and the Senior Center entrance. VTA recommends upgrading the beacon to a Rectangular Rapid Flashing Beacon (RRFB), which has shown to have higher compliance rates than standard beacons

At the southwest corner of the project, the plans show a relocated tree surrounded by a series of sidewalks VTA recommends installing a connection from the sidewalk around the tree to the sidewalk that connects to the intersection

Bicycle Accommodations

The Cupertino Bicycle Transportation Plan recommends studying buffered bike lanes or a two-way Class IV separated bikeway along the west side of Mary Avenue between Meteor Drive and Stevens Creek Boulevard VTA applauds these upgrades and recommends these improvements be installed prior to Phase I project completion Early installation will improve access to the site and allows early tenants to easily establish bicycling habits

State Route 85

A possible future transit service on SR 85 is envisioned to serve a station at Stevens Creek Boulevard Depending on whether the transit service operates in a median or right-side running lane, the station could be located in the median, requiring access from the middle of the Stevens Creek overpass, or could be located on an onramp or off ramp The existence of a "duckout" bus stop currently located on the east side of the northbound onramp from westbound Stevens Creek Boulevard makes that area a logical place for a bus to stop

The unsignalized pork-chop style right-turn lane at the southwest corner of the project site encourages high automobile speeds, which conflicts with the future vision of a more pedestrian and bicycle-oriented corridor Removing the free right-turn onto the northbound SR 85 onramp from westbound Stevens Creek Boulevard and extending the sidewalk to the existing pork-chop island would make the crossing shorter and safer for pedestrians, allow for fewer instances of vehicles crossing the existing bike lane, and could increase the amount of developable land for the site It would also provide space for accessing a possible station/bus stop on the onramp Finally, creating a buffer behind the current duckout could make serving that stop safer for transit vehicles/shuttles

Thank you again for the opportunity to review this project If you have any questions, please do not hesitate to contact me at 408-321-5830

Sincerely,

Lola Tomey

Transportation Planner III

CU1902

CITY OF
CUPERTINO

The Westport Mixed-Use Project
Public Scoping Meeting Sign-In Sheet
Thursday, July 18, 2019

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CITY OF
CUPERTINO

The Westport Mixed-Use Project
Public Scoping Meeting Sign-In Sheet
Thursday, July 18, 2019

Name	Address	Email
PARK CHAMBERLAIN	21373 Dexter Dr, Cupto.	chamberlain54@comcast.net

APPENDIX C:
AIR QUALITY ASSESSMENT

Air Quality Assessment
for the proposed
Westport Project
in the City of Cupertino, California

Prepared by:

Kimley»Horn
Expect More. Experience Better.

Kimley-Horn and Associates, Inc.
765 The City Drive, Suite 200
Orange, California 92868
Contact: Mr. Ace Malisos
714.939.1030

July 2019

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2 ENVIRONMENTAL SETTING

3 REGULATORY SETTING

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

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LIST OF ABBREVIATED TERMS

$\mu g/m^3$	micrograms per cubic meter
AADT	Annual Average Daily Traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
AT	averaging time
ATCM	Air Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
DPM	Diesel Particulate Matter
EPA	U.S. Environmental Protection Agency
ºF	Fahrenheit
FCAA	Federal Clean Air Act
mg	milligrams
MTC	Metropolitan Transportation Commission
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NOA	naturally occurring asbestos
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
O_3	ozone
OEHHA	Office Environmental Health Hazard Assessment
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
ppm	parts per million
SB	Senate Bill
T-BACT	toxics best available control technology
TAC	Toxic Air Contaminant
VMT	vehicle miles traveled

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Westport Project. The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the proposed project and to determine the level of impact the project would have on the environment.

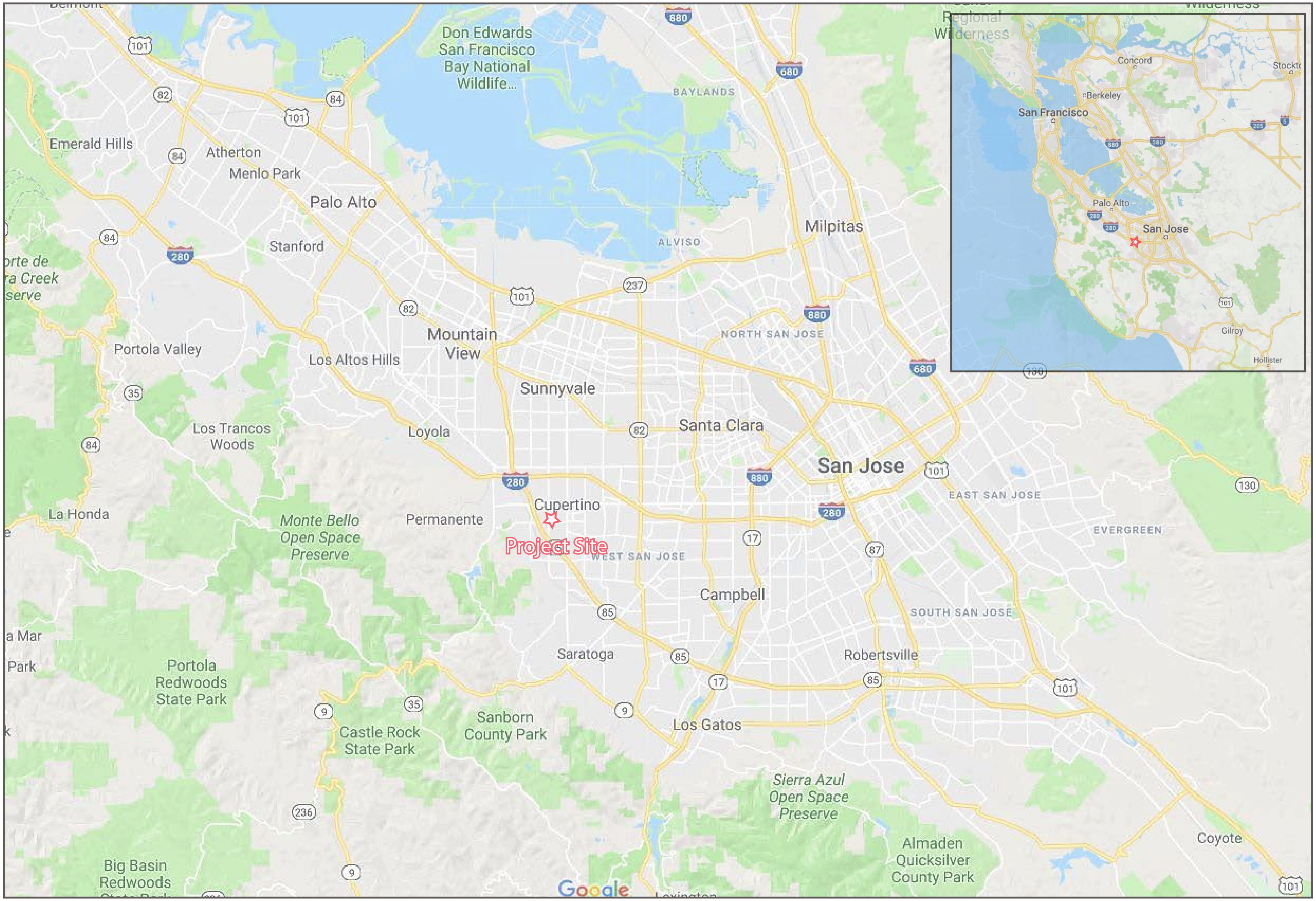
1.1 PROJECT LOCATION

The project site is located in the City of Cupertino, California within the Heart of the City Specific Plan area and is designated as a Priority Housing Site (HE-3) in the adopted Housing Element; refer to Exhibit 1. The project is located adjacent to SR-85 and Stevens Creek Boulevard; refer to Exhibit 2.

1.2 PROJECT DESCRIPTION

The proposed project is the redevelopment of 71,254 square-feet of shopping center on an 8.1-acre site to provide mixed-use urban village with 242 residential units and 20,000 square-feet of retail space. The project would have a six-story building with 115 residential units and 17,700 square-feet of ground-floor retail, a five-story building with 39 senior units and 2,300 ground-floor retail, 69 residential townhouses, and 19 residential rowhouses. The project includes a one story- belowground garage with 232 parking spaces, 117 surface parking spaces, and 176 private garage units. The proposed project includes 20 separate buildings. The maximum building height would be 70 feet. The townhouses and rowhomes have attached garages, while the mixed-use buildings use the parking garage or surface parking.

In the Heart of the City Specific Plan the project site is designated as Oaks Gateway, a Mixed Use Planned Development (General Commercial) [P(CG)]. The CG designation allows professional, general, administrative, business offices, dance and music studios, child care centers, as well as other uses that do not involve the direct retailing of goods or services to the general public. However, the mixed use allows residential located behind the primary uses and above the ground level.



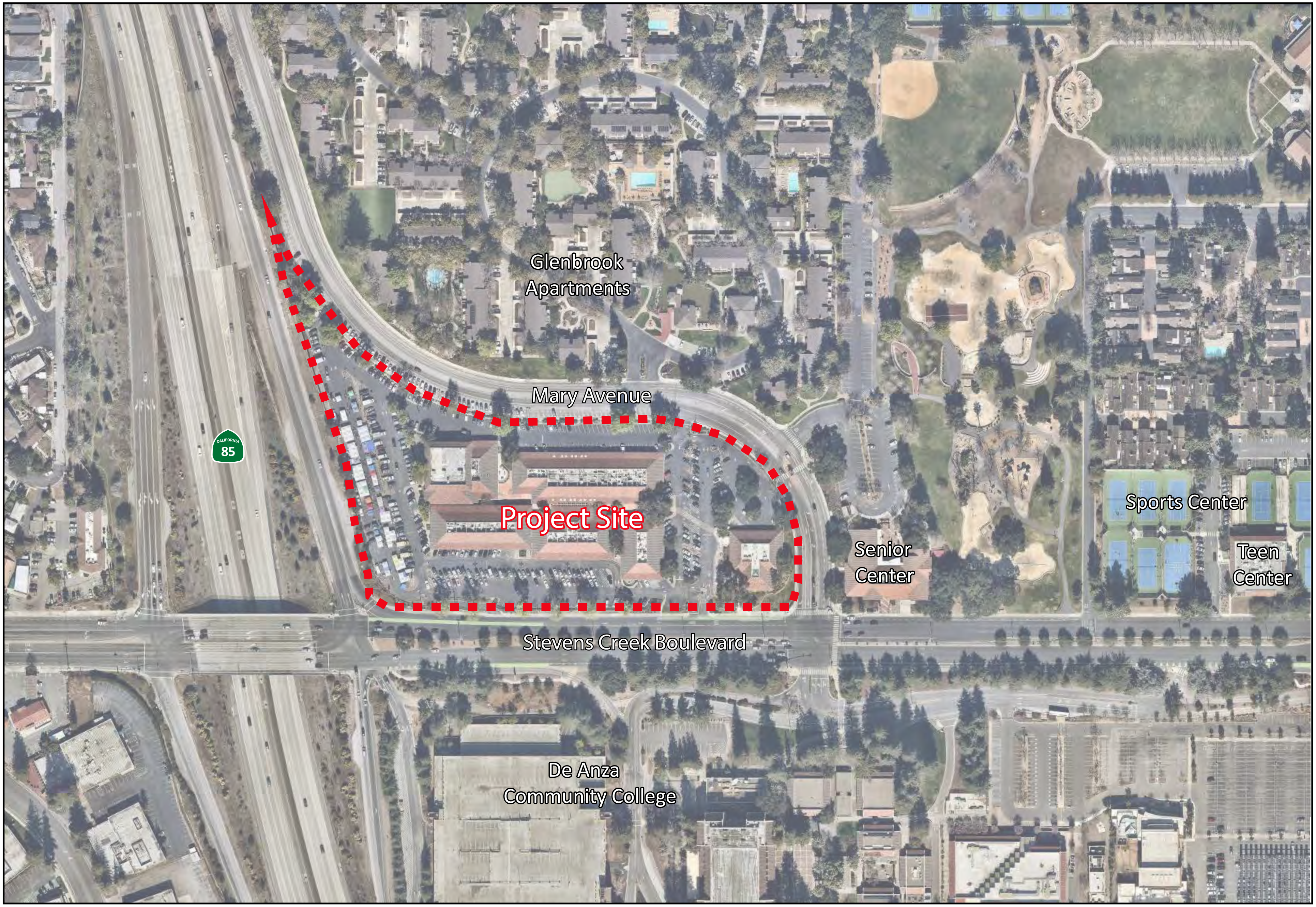
Source: Kimley-Horn and Associates, 2018

Figure 1: Regional Location Map

Westport Project

Not to scale

Expect More. Experience Better.



Source: Kimley-Horn and Associates, 2018

Exhibit 2: Site Vicinity

Westport Project

N Not to scale

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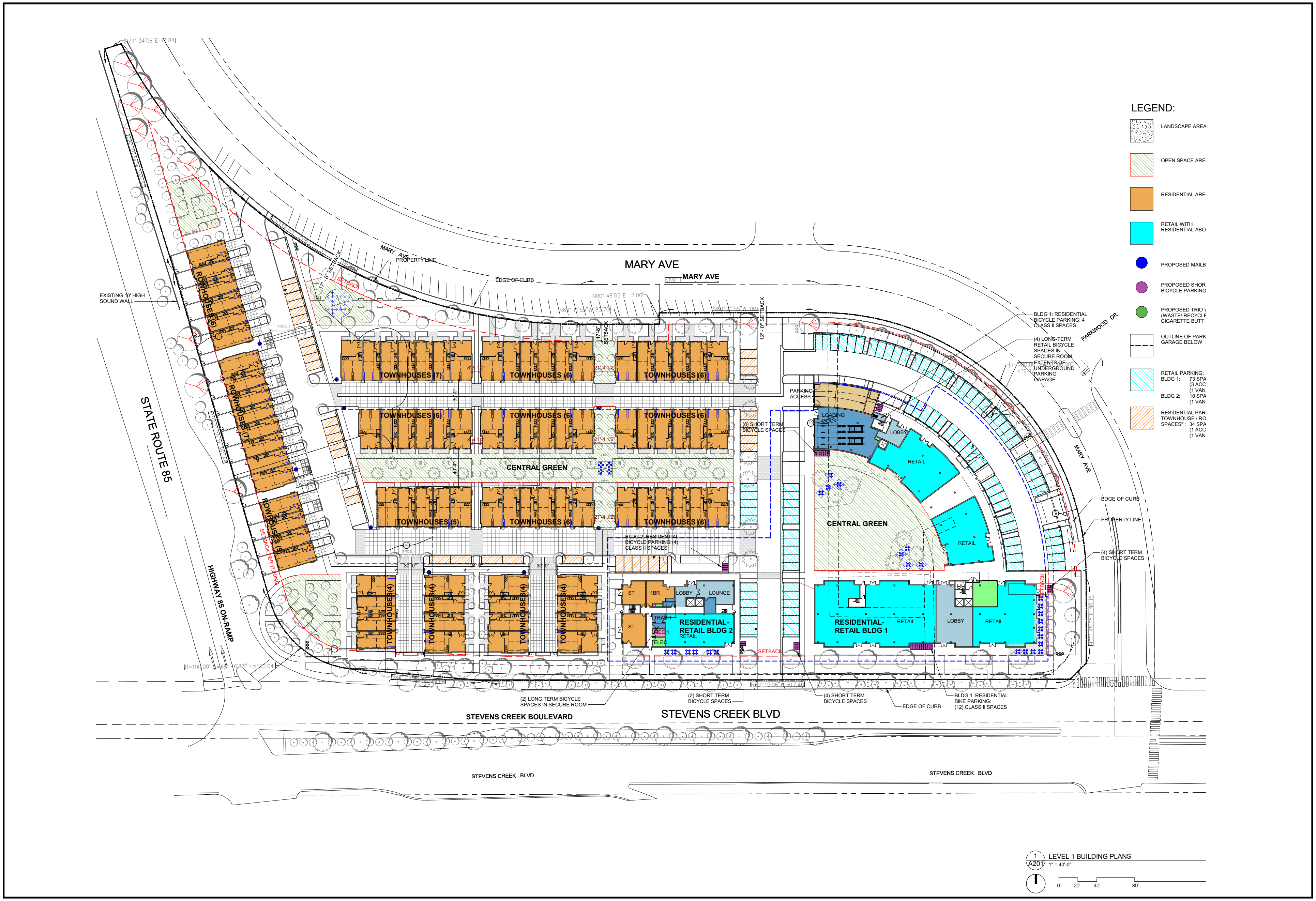

Source: C2K Architecture Inc., 2018

Exhibit 3: Site Plan

Westport Project

Not to scale

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2 ENVIRONMENTAL SETTING

2.1 CLIMATE AND METEOROLOGY

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The proposed project is located within the San Francisco Bay Area Air Basin (Basin). This Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The City of Cupertino is located in the Santa Clara Valley climatological subregion of the Basin. This subregion is bounded by the San Francisco Bay to the north and by mountains to the east, south, and west. Temperatures are warm on summer days and cool on summer nights, and winter temperatures are fairly mild. At the northern end of the valley, mean maximum temperatures are in the low 80s during the summer and the high 50s during the winter, and mean minimum temperatures range from the high 50s in the summer to the low 40s in the winter. Further inland, where the moderating effect of the Bay is not as strong, temperature extremes are greater. For example, in San Martin, located 27 miles south of the San Jose Airport, temperatures can be more than 10 degrees warmer on summer afternoons and more than 10 degrees cooler on winter nights.

Winds in the valley are greatly influenced by the terrain, resulting in a prevailing flow that roughly parallels the valley's northwest-southeast axis. A north-northwesterly sea breeze flows through the valley during the afternoon and early evening, and a light south-southeasterly drainage flow occurs during the late evening and early morning. In the summer the southern end of the valley sometimes becomes a "convergence zone," when air flowing from the Monterey Bay gets channeled northward into the southern end of the valley and meets with the prevailing north-northwesterly winds.

Wind speeds are greatest in the spring and summer and weakest in the fall and winter. Nighttime and early morning hours frequently have calm winds in all seasons, while summer afternoons and evenings are quite breezy. Strong winds are rare, associated mostly with the occasional winter storm.

The air pollution potential of the Santa Clara Valley is high. High summer temperatures, stable air, and mountains surrounding the valley combine to promote ozone formation. In addition to the many local sources of pollution, ozone precursors from San Francisco, San Mateo, and Alameda Counties are carried by prevailing winds to the Santa Clara Valley. The valley tends to channel pollutants to the southeast. In addition, on summer days with low level inversions, ozone can be recirculated by southerly drainage flows in the late evening and early morning and by the prevailing northwester lies in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. This movement of the air up and down the valley increases the impact of the pollutants significantly.

Pollution sources are plentiful and complex in this subregion. The Santa Clara Valley has a high concentration of industry at the northern end, in the Silicon Valley. Some of these industries are sources of air toxics as well as criteria air pollutants. In addition, Santa Clara Valley's large population and many work-site destinations generate the highest mobile source emissions of any subregion in the Basin.

2.2 AIR POLLUTANTS OF CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NOx in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1, *Air Contaminants and Associated Public Health Concerns*.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.

Table 1: Air Contaminants and Associated Public Health Concerns (continued)		
Pollutant	**Major Man-Made Sources**	**Human Health Effects**
Lead	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
Notes: 1. Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association, *Health Effects*, http://www.capcoa.org/health-effects/, Accessed April 10, 2018.		

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest air monitoring station to the proposed project is the Los Gatos Monitoring Station (located approximately 7.5 miles to the south). Local air quality data from 2014 to 2016 are provided in Table 2, *Ambient Air*

Quality Data. As the Los Gatos Monitoring Station only collects data for O_3, Table 2 also includes data from the San Jose-Jackson Street Monitoring station, which is the next closest to the site (located approximately 8.5 miles to the east). Table 2 lists the monitored maximum concentrations and number of exceedances of federal/state air quality standards for each year.

Table 2: Ambient Air Quality Data

Pollutant	Los Gatos[1]			San Jose-Jackson Street[2]		
	2015	2016	2017	2015	2016	2017
Ozone (O_3)						
1-hour Maximum Concentration (ppm)	0.100	0.091	0.093	0.094	0.087	0.121
8-hour Maximum Concentration (ppm)	0.084	0.065	0.075	0.081	0.066	0.098
Number of Days Standard Exceeded						
CAAQS 1-hour (>0.09 ppm)	1	0	0	0	0	3
NAAQS 8-hour (>0.070 ppm)	4	0	3	2	0	4
Carbon Monoxide (CO)						
1-hour Maximum Concentration (ppm)	--	--	--	2.43	1.95	1.87
Number of Days Standard Exceeded						
NAAQS 1-hour (>35 ppm)	--	--	--	0	0	0
CAAQS 1-hour (>20 ppm)	--	--	--	0	0	0
Nitrogen Dioxide (NO_2)						
1-hour Maximum Concentration (ppm)	--	--	--	49.3	51.1	67.5
Number of Days Standard Exceeded						
NAAQS 1-hour (>100 ppm)	--	--	--	0	0	0
CAAQS 1-hour (>0.18 ppm)	--	--	--	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10})						
National 24-hour Maximum Concentration	--	--	--	58.8	40.0	69.4
State 24-hour Maximum Concentration	--	--	--	58.0	41.0	69.8
State Annual Average Concentration (CAAQS=20 μg/m^3)	--	--	--	21.9	18.3	21.3
Number of Days Standard Exceeded						
NAAQS 24-hour (>150 μg/m^3)	--	--	--	0	0	0
CAAQS 24-hour (>50 μg/m^3)	--	--	--	1	0	6
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$)						
National 24-hour Maximum Concentration	--	--	--	49.4	22.6	49.7
State 24-hour Maximum Concentration	--	--	--	49.4	22.7	49.7
Number of Days Standard Exceeded						
NAAQS 24-hour (>35 μg/m^3)	--	--	--	2	0	6

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; μg/m^3 = micrograms per cubic meter; NM = not measured

Notes:
1. Measurements taken at the Los Gatos Monitoring Station located at 306 University Avenue, Los Gatos, California 95030 (CARB# 43380).
2. Measurements taken at the San Jose-Jackson Street Monitoring Station located at 158 East Jackson Street, San Jose, California 95112 (CARB #43383).

Source: All pollutant measurements are from the California Air Resources Board Aerometric Data Analysis and Management system (iADAM) database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the California Air Resources Board Air Quality and Meteorological Information System (AQMIS) (https://www.arb.ca.gov/aqmis2/aqdselect.php).

2.3 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Table 3, *Sensitive Receptors*, lists the distances and locations of sensitive receptors within the Project vicinity. The distances depicted in Table 3 are based on the distance from the Project site to the vicinity sensitive receptors.

Table 3: Sensitive Receptors

Receptor Type/Description	**Distance and Direction from the Project Site**[1]
Residential- Apartments	90 feet north
City of Cupertino Senior Center	80 feet east
De Anza Community College	140 feet south
City of Cupertino Teen Center and Sports Center	612 feet east
Single-family residential neighborhood	630 feet northeast

[1] Distance calculated from property line of proposed project site and property line of the sensitive receptors

3 REGULATORY SETTING

3.1 FEDERAL

Federal Clean Air Act

Air quality is federally protected by the Clean Air Act and its amendments. Under the Federal Clean Air Act (FCAA), the EPA developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including ozone, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The Clean Air Act requires each state to prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the Clean Air Act. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 CFR Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. The SVAB attainment status with respect to federal standards is summarized in Table 4, *State and Federal Ambient Air Quality Standards*.

3.2 STATE OF CALIFORNIA

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the National Ambient Air Quality Standards (NAAQS) in Table 4.2-2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The Basin attainment status with respect to state standards is summarized in Table 4.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]		Federal Standards[2]	
		Concentration	**Attainment Status**	**Concentration[3]**	**Attainment Status**
Ozone (O_3)	8 Hour	0.070 ppm (137 µg/m^3)	N[9]	0.070 ppm	N[4]
	1 Hour	0.09 ppm (180 µg/m^3)	N	NA	N/A[5]
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	A	9 ppm (10 mg/m^3)	A
	1 Hour	20 ppm (23 mg/m^3)	A	35 ppm (40 mg/m^3)	A[6]
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	A	0.10 ppm[11]	U
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	-	0.053 ppm (100 µg/m^3)	A
Sulfur Dioxide[12] (SO_2)	24 Hour	0.04 ppm (105 µg/m^3)	A	0.14 ppm (365 µg/m^3)	A
	1 Hour	0.25 ppm (655 µg/m^3)	A	0.075 ppm (196 µg/m^3)	A
	Annual Arithmetic Mean	NA	-	0.03 ppm (80 µg/m^3)	A
Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	N	150 µg/m^3	-
	Annual Arithmetic Mean	20 µg/m^3	N[7]	NA	U
Fine Particulate Matter ($PM_{2.5}$) [15]	24-Hour	NA	-	35 µg/m^3	U/A
	Annual Arithmetic Mean	12 µg/m^3	N[7]	12 µg/m^3	N
Sulfates (SO_{4-2})	24 Hour	25 µg/m^3	A	NA	-
Lead (Pb)[13, 14]	30-Day Average	1.5 µg/m^3	-	NA	A
	Calendar Quarter	NA	-	1.5 µg/m^3	A
	Rolling 3-Month Average	NA	-	0.15 µg/m^3	-
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.15 µg/m^3)	U	NA	-
Vinyl Chloride (C_2H_3Cl)	24 Hour	0.01 ppm (26 µg/m^3)	-	NA	-
Visibility Reducing Particles[8]	8 Hour (10:00 to 18:00 PST)	-	U	-	-

A = attainment; N = nonattainment; U = unclassified; N/A = not applicable or no applicable standard; ppm = parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; – = not indicated or no information available.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m$_3$. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3.

   Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.
3. National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

(footnotes continued on next page)

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4. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
5. The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.
6. In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
7 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.
8 Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
9. The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
10. On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as “non-attainment” for the national 24-hour $PM_{2.5}$ standard until such time as the Air District submits a “redesignation request” and a “maintenance plan” to EPA, and EPA approves the proposed redesignation.
11. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
12. On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.
13. CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure below which there are no adverse health effects determined.
14. National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
15. In December 2012, EPA strengthened the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter ($\mu g/m^3$). In December 2014, EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Source: Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status, accessed April 20, 2018.

3.3 REGIONAL

Bay Area Air Quality Management District

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

As seen in Table 4, in general, the Bay Area experiences low concentrations of most pollutants when compared to federal standards, except for O_3 and particulate matter (PM), for which standards are exceeded periodically. With respect to federal standards, the Bay Area’s attainment status for 8-hour ozone is classified as “marginal nonattainment” and “nonattainment” for $PM_{2.5}$. As a designated “marginal” nonattainment area for the federal 8-hour ozone standard, preparation of a SIP is currently not required. However, in response to the EPA’s designation of the Basin for the previous nonattainment 8-hour federal ozone standard, the BAAQMD, ABAG, and MTC were required to develop an ozone attainment plan to meet this standard. The *1999 Ozone Attainment Plan* was prepared and adopted by these agencies in June 1999 and this federal plan was updated in 2001. The most recent state ozone plan is the Bay Area *2010 Clean Air Plan.* The *2010 Clean Air Plan* was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants, and greenhouse gases. In 1998, after many years without violations of any CO standards, the attainment status for CO was upgraded to "attainment."

Under CEQA, the BAAQMD is a commenting responsible agency on air quality within its jurisdiction or impacting its jurisdiction. The BAAQMD reviews projects to ensure that they would: (1) support the primary goals of the latest Air Quality Plan; (2) include applicable control measures from the Air Quality Plan; and (3) not disrupt or hinder implementation of any Air Quality Plan control measures.

In May 2010, the BAAQMD adopted its updated *California Environmental Quality Act (CEQA) Air Quality Guidelines* as a guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA. The BAAQMD *CEQA Guidelines* include methodologies and thresholds for addressing project and program level air quality and greenhouse gas (GHG) emissions. The Guidelines were called into question by an order issued March 5, 2012, in California Building Industry Association (CBIA) v. BAAQMD (Alameda Superior Court Case No. RGI0548693). The Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD had complied with CEQA. Notably, the court's ruling was based solely on BAAQMD's failure to comply with CEQA. The court did not reach any issues relating to the validity of the scientific reasoning underlying the recommended significance thresholds.

In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds.[1] CBIA sought review by the California Supreme Court on three issues, including the appellate court's decision to uphold the BAAQMD's adoption of the thresholds, and the Court granted review on just one: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In December 2015, the California Supreme Court confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project.[2] The BAAQMD published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. The BAAQMD is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

Bay Area Air Quality Planning Relative to State and Federal Standards

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM10 standard). The *2017 Clean Air Plan: Spare the Air, Cool the Climate* was adopted on April 19, 2019, by the BAAQMD.

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG)

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[1] California Court of Appeal, First Appellate District, Case Nos. A135335 & A136212.

[2] *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 [No. S 213478]

reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

3.4. LOCAL

City of Cupertino General Plan

The City of Cupertino General Plan- Community Vision 2015-2040 is a roadmap that encompasses the hopes, aspirations, values and dreams of the Cupertino community. Project relevant General Plan policies for air quality are addressed in this section. Where inconsistencies exist, if any, they are addressed in the respective impact analysis below. Relevant General Plan Policies that directly address reducing and avoiding natural resources impacts include the following:

GOAL M-8: Promote Policies to Help Achieve State, Regional and Local Air Quality and Greenhouse Gas Emission Reduction Targets

GOAL ES-4: Maintain Healthy Air Quality Levels

Policy ES-4.1: New Development.

Minimize the air quality impacts of new development projects and air quality impacts that affect new development.

- **Strategy ES-4.1.1: Toxic Air Contaminants**
  Continue to review projects for potential generation of toxic air contaminants at the time of approval and confer with Bay Area Air Quality Management District on controls needed if impacts are uncertain.

- **Strategy ES-4.1.2: Dust Control**
  Continue to require water application to non-polluting dust control measures during demolition and the duration of the construction period.

- **Strategy ES-4.1.3: Planning**
  Ensure that land use and transportation plans support air quality goals.

Policy ES-4.3: Use of Open Fires and Fireplaces.

Discourage high pollution fireplace use.

- **Strategy ES-4.3.1: Education**
  Continue to make BAAQMD literature on reducing pollution from fireplace use available.

- **Strategy ES-4.3.2: Fireplaces**
  Continue to prohibit new wood-burning fireplaces, except U.S. EPA certified wood stoves as allowed by the Building Code.

City of Cupertino Municipal Code

The City of Cupertino Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section. Title 19 of the Municipal Code is the City's Zoning Ordinance, which, among other purposes, is intended to assure the orderly and beneficial development of the City, attain a desirable balance of residential and employment opportunities, and promote efficient urban design and arrangement. The Zoning Ordinance contains the standards for emissions from development projects in Section 19.72.050. No use shall be allowed which is or will be offensive by emission of dust, smoke, or fumes.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 AIR QUALITY THRESHOLDS

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people; or

BAAQMD Thresholds

The BAAQMD's *CEQA Air Quality Guidelines* provides significance thresholds for both construction and operation of projects. If the BAAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in Table 5, *Bay Area Air Quality Management District Emissions Thresholds*, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 5: Bay Area Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors (Regional)	Construction-Related	Operational-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emission (pounds/day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
PM_{10}/$PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average 20.0 ppm (1-hour average)	

Source: Bay Area Air Quality Management District, *2017 CEQA Air Quality Guidelines,* 2017.

It should be noted that a quantitative CO impact analysis is required by BAAQMD (comparing project emissions to the CAAQS), if none of the following are met:

- Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Cumulative Emissions Thresholds

The BAAQMD's 2017 Clean Air Plan was prepared to accommodate growth, meet State and Federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the BAAQMD CEQA Air Quality Guidelines, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the BAAQMD CEQA Air Quality Guidelines states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

4.2 METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the proposed project. Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with proposed project construction would generate emissions of criteria air pollutants and precursors. Construction-related and operational emissions are evaluated consistent with methodologies outlined in the BAAQMD *CEQA Air Quality Guidelines* for assessing and mitigating air quality impacts. The proposed project's construction-related exhaust emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a project's impact on regional air quality.

The BAAQMD *CEQA Air Quality Guidelines* also provide significance thresholds for emissions associated with proposed project operations. Operational emissions associated with the proposed project are estimated using the California Emissions Estimator Model (CalEEMod). Project-generated increases in emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the project was obtained from the project Transportation Analysis Memorandum prepared by Kimley-Horn (2018). This impact analysis assumes full occupancy of the project site based on the 2018 traffic analysis prepared by Kimley Horn and Associates.

5 POTENTIAL IMPACTS AND MITIGATION

Threshold 5.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The project site is a Priority Housing Element site in the City of Cupertino's adopted Housing Element to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014-2022 planning period and meet the City's fair-share housing obligation of 1,064 units. According to the Housing Element, the site has a maximum density of 30 (DUA). Because the site is approximately 8.1 acres it has a realistic capacity of 243 units. The proposed project includes 242 units which is below the growth assumed for the site in the City's Housing Element.

A project would be consistent with the 2017 Clean Air Plan Progress Report if the project would not exceed the growth assumptions in the plan. The primary method of determining consistency with the 2017 Clean Air Plan growth assumptions is consistency with the General Plan land use designations and zoning ordinance designations for the site. If the General Plan growth forecast was adopted prior to the adoption of the 2017 Clean Air Plan, then it can be assumed that the 2017 Clean Air Plan incorporates the growth forecast from the General Plan.

The Clean Air Plan assumptions for projected air emissions and pollutants in the City are based on the land use and development projection assumptions in the General Plan. The project site currently has a land use designation of Commercial/Residential and is a Priority Housing Site. The site is zoned Heart of the City Specific Plan Area. According to the Specific Plan the P(CG) or Planned Mixed Use Development (General Commercial) zoning allows for professional, general, administrative, business offices, business services, vocational and specialized schools, dance and music studios, gymnasiums and health clubs, child care centers and other uses that do not involve the direct retailing of goods or services to the general public shall be limited to occupy no more than 25 percent of the total building frontage along Stevens Creek Boulevard and/or 50 percent of the rear of the building. According to the Development and Design Guidelines for the Specific Plan Area, the site is permitted residential uses. The project is conforming with City regulations (i.e., consistent with the current land use designations for the project site) and would require a development site permit and tentative parcel maps. Additionally, as described below in Threshold 5.2, construction and operational air quality emissions generated by the proposed project would not exceed the BAAQMD's emissions thresholds. These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants, and would not contribute to any non-attainment areas in the SFBAAB. Therefore, the project would be in compliance with the 2017 Clean Air Plan and impacts would be less than significant.

Level of Significance: Less than significant impact.

Threshold 5.2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction Emissions

Short-term air quality impacts are predicted to occur during demolition, grading, and construction operations associated with implementation of the proposed project. Construction associated with the proposed project would generate criteria air pollutant emissions. Construction-generated emissions are relatively short term and of temporary duration, lasting only as long as construction activities occur, but are considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

Construction results in the temporary generation of emissions resulting from demolition, site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities for the project is estimated to be approximately 16 months. The project would demolish the existing 71,254 square-foot existing shopping center and surface parking. In addition, the project would require the import export of 69,000 cubic yards during the grading/site preparation phases to accommodate a subterranean parking garage.

Construction-generated emissions were calculated using CalEEMod, which is designed to model emissions for land use development projects based on typical construction requirements. Predicted average daily construction-generated emissions for the proposed project are identified in Table 6, *Average Daily Project Construction Emissions*.

Fugitive Dust

Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. As shown in Table 6, the BAAQMD does not have numerical threshold for construction fugitive dust, but instead recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds; refer to MM AQ-1.

Table 6: Average Daily Project Construction Emissions

Emissions Source	Pollutant (average pounds per day)[1, 2]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2019						
Unmitigated Emissions	4.31	50.14	1.85	1.72	5.84	2.19
2020						
Unmitigated Emissions	31.56	27.69	1.26	1.19	2.51	0.68
Maximum Unmitigated	31.56	50.14	1.85	1.72	5.84	2.19
BAAQMD Significance Threshold	54	54	82	54	N/A	N/A
Exceed BAAQMD Threshold after Mitigation?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

Notes:
1. Emissions were calculated using CalEEMod. Average daily emissions were calculated by dividing the annual emissions by the number of working days of construction for the year (project construction is two full years and would have approximately 250 days per year).
2. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, updated May 2017.
Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality Modeling Data*.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite.

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. As shown in Table 6, average daily project construction emissions would not exceed BAAQMD thresholds.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the BAAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. In addition, based upon the size of the buildings, architectural coatings were also quantified in CalEEMod.

The highest concentration of ROG emissions would be generated during the application of architectural coatings beginning in 2020. As required by law, all architectural coatings for the project structures would comply with BAAQMD Regulation 8, Rule 3: Architectural Coating. Regulation 8, Rule 3 provides specifications on painting practices and regulates the ROG content of paint. As shown in Table 6, average daily project construction ROG emissions would not exceed BAAQMD thresholds.

As shown in Table 6 and described above, project construction would not exceed the BAAQMD average daily thresholds of significance. Additionally, although the BAAQMD does not have numerical thresholds for fugitive PM_{10} and $PM_{2.5}$ emissions, the proposed project would be required to comply with the BAAQMD Basic Construction Measures (refer to MM AQ-1). Additionally, the project would be subject to applicable BAAQMD Regulations, such as Regulation 8 Rule 3: Architectural Coatings and 15: Emulsified and Liquid Asphalts, and Regulation 9, Rule 8: Organic Compounds to further reduce specific construction-related emissions. Table 6 identifies project emissions with the implementation of the applicable reduction measures required by BAAQMD Rules. With the implementation of MM AQ-1, construction impacts would be less than significant.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986. Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. As a result, no impacts associated with natural occurring asbestos would occur.

The City's General Plan Environmental Impact Report (EIR) determined that adherence to the BAAQMD's Basic Control Measures for reducing construction emissions would ensure impacts are less than significant. However, due to the programmatic nature of the General Plan Amendment, the EIR concluded that impacts would be significant and unavoidable. The General Plan EIR noted that the identification of this program-level impact would not preclude the finding of less than significant impacts for subsequent projects that comply with BAAQMD applicable thresholds of significance. As described above, the proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and construction emissions associated with the proposed project would not with exceed the BAAQMD's thresholds with the implementation of MM AQ-1. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

Operational Emissions

Operational emissions for residential developments are typically generated from mobile sources (burning of fossil fuels in cars); energy sources (cooling, heating, and cooking); and area sources (landscape equipment and household products). According to Table 7, *Average Daily Project Operational Emissions Unmitigated,* shows ROG emission thresholds exceeded for area source emissions.

Table 7: Average Daily Project Operational Emissions Unmitigated

Emission Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Exhaust		Fugitive	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Annual Emissions (maximum tons per year)						
Area Source Emissions	2.39	0.03	0.04	0.04	--	--
Energy Emissions	0.01	0.11	0.01	0.01	--	--
Mobile Emissions[1]	0.55	2.24	0.02	0.02	1.61	0.43
Total Project Unmitigated Emissions	2.96	2.38	0.07	0.06	1.61	0.43
BAAQMD Threshold[1]	*10*	*10*	*15*	*10*	*N/A*	*N/A*
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**
Average Daily Emissions (pounds)						
Area Source Emissions	13.09	0.15	0.21	0.21	--	--
Energy Emissions	0.07	0.59	0.05	0.05	--	--
Mobile Emissions[1]	3.04	12.27	0.10	0.10	8.84	2.37
Total Project Unmitigated Emissions	16.20	13.02	0.36	0.36	8.84	2.37
BAAQMD Threshold[2]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

Notes:
1. Mobile emissions conservatively represent emissions associated with the full project (i.e., 2,174 daily vehicle trips), and do not take credit/trip reductions for the existing uses.
2. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, 2017.
Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality Modeling Data*.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport PM_{10} and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the Project Traffic Impact Study. Based on the Traffic Impact Study, the proposed project would result in an average of approximately 2,174 total daily vehicle trips (it should be noted that the analysis conservatively does not take credit for existing vehicle trips generated on the project site or internal trip capture). Table 7 shows the project emissions generated by vehicle traffic associated with the proposed project would not exceed established BAAQMD regional thresholds.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the proposed project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 7, unmitigated energy source emissions from the proposed project would not exceed BAAQMD thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$.

As indicated in Table 7, operational emissions from the proposed project would not exceed BAAQMD thresholds. As such, the project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. As a result, impacts associated with operational air quality would be less than significant.

Area Source Emissions

Area source emissions would be generated due to an increased demand for consumer products, architectural coating, hearths, and landscaping. As shown in Table 7, unmitigated area source emissions from the proposed project would not exceed BAAQMD thresholds. Therefore, impacts would be less than significant.

The City's General Plan EIR determined that future development under the General Plan would result in a substantial long-term increase in criteria air pollutants over the 26-year General Plan horizon. Compliance with the General Plan policies and strategies would reduce operational emissions from development under to the maximum extent practicable. However, because total development anticipated within the City of Cupertino could exceed the regional significance thresholds, the General Plan could contribute to an increase in health effects in the basin until such time the attainment standard are met in the SFBAAB. The General Plan EIR concluded that this impact is considered significant and unavoidable. As described above, emissions associated with the proposed project would not exceed the BAAQMD's operational thresholds of significance. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

Mitigation Measures

MM AQ-1: **BAAQMD Basic Construction Measures.** Prior to any grading activities, the applicant shall prepare and implement a Construction Management Plan that includes the BAAQMD Basic Construction Mitigation Measures to minimize construction-related emissions. This shall plan shall first be reviewed and approved by the Director of Public Works/City Engineer. The BAAQMD Basic Construction Mitigation Measures are:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Level of Significance: Less than significant impact with mitigation measures.

Threshold 5.3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Cumulative Short-Term Emissions

The SFBAAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. As discussed above, the project's construction-related emissions by themselves would not have the potential to exceed the BAAQMD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. The BAAQMD recommends Basic Construction Mitigation Measures for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in Table 7, the proposed project's operational emissions would not exceed BAAQMD thresholds. As a result, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

The City's General Plan EIR determined that the General Plan would contribute to cumulative air quality impacts in the SFBAAB. Air pollutant emissions associated with the General Plan were concluded to result in a cumulatively considerable contribution to air quality impacts, and impacts would be significant and unavoidable. As described above, emissions associated with the proposed project would not exceed the BAAQMD's construction or operational thresholds of significance and emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the project expose sensitive receptors to substantial pollutant concentrations?

Toxic Air Contaminants

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known toxic air contaminants (TAC). Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptor to the project site are the residences to the east and north of the project site. BAAQMD provides guidance for evaluating impacts from TACs in its *CEQA Air Quality Guidelines* document. As noted therein, an incremental cancer risk of greater than 10 cases per million at the Maximally Exposed Individual (MEI) will result in a significant impact. The BAAQMD considers exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 $\mu g/m^3$ from a single source to be significant. The BAAQMD significance threshold for non-cancer hazards is 1.0.

Construction TAC

Construction-related activities would result in project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., demolition, clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptor to the project site are the residences to the north on Mary Avenue, the senior center to the east on Mary Avenue, and De Anza Community College south of Stevens Creek Boulevard.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur throughout the site. Additionally, construction activities would be subject to and would comply with California regulations limiting idling to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. Furthermore, even during the most intense year of construction, emissions of diesel PM would be generated from different locations on the project site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time.

The EPA recommended screening model AERSCREEN has been used to evaluate potential health effects to sensitive receptors from construction emissions of diesel particulate matter (DPM). AERSCREEN is the recommended screening model based on the AERMOD dispersion model. The model produces estimates of worst-case concentrations without the need for hourly meteorological data. According to the EPA Support Center for Regulatory Atmospheric Modeling (SCRAM) website, AERSCREEN is intended to produce concentration estimates that are equal to or greater than the estimates produced by AERMOD with a fully developed set of meteorological and terrain data.[3] Maximum (worst case) $PM_{2.5}$ exhaust construction emissions over the entire construction period were used in AERSCREEN to approximate construction DPM emissions. Risk levels were calculated according to the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015).

PM_{10} and $PM_{2.5}$ construction emissions rates in grams per second were calculated from the total annual unmitigated exhaust emissions reported in CalEEMod (0.2313 tons per year of PM_{10} and 0.2149 tons per year of $PM_{2.5}$). Annual emissions were converted to grams per second and these emissions rates were input into AERSCREEN. Results of this assessment indicate that the maximum concentration of $PM_{2.5}$ during construction would be 0.011 $\mu g/m^3$ which is below the BAAQMD 0.3 $\mu g/m^3$ significance threshold. The highest calculated carcinogenic risk from project construction is 2.23 per million based on an annual PM_{10} concentration of 0.012 $\mu g/m^3$. The risk calculation used a construction exposure duration of two years and a weighted breathing rate of 999 liters per kilogram of bodyweight per day (based on OEHHA 95 percentile breathing rates of 3 moths at 361 and 21 months at 1,090). Non-cancer hazards for DPM would be below BAAQMD threshold of 1.0, with a chronic hazard index computed at 0.001 and an acute hazard index of 0.01. As described above, worst-case construction risk levels based on screening-level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds. Therefore, construction risk levels would be less than significant.

Mobile Sources

The project would place sensitive receptors within 1,000-feet of the SR-85 freeway and Stevens Creek Boulevard (mobile TAC sources). Potential risks from traffic emissions generated along these roadways were evaluated using an analysis methodology that considers local traffic conditions, site-specific meteorology, and future exposures.

The air dispersion modeling for the mobile source risk assessment was performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack

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[3] US EPA. Air Quality Dispersion Modeling- Screening Models. 2017. https://www.epa.gov/scram/air-quality-dispersion-modeling-screening-models

heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data was obtained from CARB. Surface and upper air meteorological data from the Moffett Field Monitoring Station was selected as being the most representative for meteorology based on proximity to the project site.

The emission sources in the model are line volume sources (comprised of numerous adjacent volume sources) along SR-85 and Stevens Creek Boulevard adjacent to the project site. An emission rate for PM_{10} (a proxy for DPM) was calculated using traffic volumes from the Traffic Study and an Emission FACtor model (EMFAC2017) model run for the Santa Clara County sub-area of the San Francisco Bay Area Air Basin; refer to Appendix B. Heavy duty vehicle DMP emissions were assigned a release height of 14 feet (4.15 meters) to represent the average stack height for trucks and a plume height of 20 feet (6.3 meters). All other non-heavy duty mobile sources were used for sources of total organic gases (TOG). The modeling for this set of sources used a release height of two feet (0.60 meters).

AERMOD was run to obtain the peak 1-hour and annual average concentration in micrograms per cubic meter [$\mu g/m^3$] of PM_{10} at the project site. Note that the concentration estimate developed using this methodology is considered conservative, and is not a specific prediction of the actual concentrations that would occur at the project site any one point in time. Actual 1-hour and annual average concentrations are dependent on many variables, particularly the number and type of vehicles traveling during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year lifetime basis exposure scenarios. The cancer risk calculations were based on applying age sensitivity weighting factors for each emissions period modeled. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the proposed project was assessed.

Based on the AERMOD outputs, the highest expected hourly average diesel PM_{10} emission concentrations at the project site would be 0.008 $\mu g/m^3$. The highest expected annual average PM_{10} emission concentrations at the project site would be 0.002 $\mu g/m^3$. The analysis for the project assumed the site would not be occupied until 2020. CARB's Hotspots Analysis and Reporting Program (HARP), Risk Assessment Standalone Tool was used to calculate the cancer risk values. The highest calculated carcinogenic risk as a result of the project is 9.82 per million for 70-year exposure; refer to Table 8, *Operational Health Risk*. Additionally, acute and chronic hazards would be 0.003 and 0.008, respectively, which are below the hazard index threshold of 1.0. Therefore, impacts related to cancer risk and hazards from mobile sources would be less than significant at the project site.

In addition to mobile sources, stationary sources within a 1,000-foot radius of the project site were identified using BAAQMD's Stationary Source Screening Analysis Tools and consultation with the BAAQMD. As indicated in Table 8, TACs generated from the stationary and mobile sources within a 1,000-foot radius would not exceed BAAQMD thresholds.

Table 8: Operational Health Risk				
Emissions Sources	**$PM_{2.5}$ ($\mu g/m^3$)**	**Cancer Risk (per million**	**Chronic Hazard**	**Acute Hazard**
Mobile Sources				
SR-85	0.07	9.82	0.008	0.003
Stevens Creek Boulevard	0.02	5.21	0.003	0.001
Stationary Sources				
Cupertino Union 76 (gas dispensing facility)	0	0.23	0.04	0
De Anza Community College (generator)	0.02	0.59	0.06	0
De Anza Community College (gas dispensing facility)	0	0.46	0.04	0
BAAQMD Threshold	*0.3*	*10*	*1.0*	*1.0*
Threshold Exceeded?	**No**	**No**	**No**	**No**
Cumulative Health Risk Values	0.11	16.31	0.151	0.004
BAAQMD Cumulative Threshold	*0.8*	*100*	*10*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Off-Site Impacts

The proposed project would not be considered a source of TACs that would pose a possible risk to off-site uses. The project involves the future development of mixed-use project that would include commercial and residential uses. The project would not include stationary sources that emit TACs and would not generate a significant amount of heavy-duty truck trips (a source of diesel particulate matter [DPM]). Therefore, no impacts to surrounding receptors associated with TACs would occur.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783).

As previously discussed, project emissions would be less than significant and would not exceed BAAQMD thresholds (refer to Table 6 and Table 7). The BAAQMD has set its CEQA significance threshold based on the trigger levels for the federal NSR Program and BAAQMD's Regulation 2, Rule 2 for new or modified sources. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health of sensitive populations such as asthmatics, children, and the elderly. Therefore, the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur. Sensitive receptors would not be exposed to criteria pollutant levels exceeding ambient air quality standards.

Parking Structure Hotspots

Carbon monoxide concentrations are a function of vehicle idling time, meteorological conditions, and traffic flow. Therefore, parking structures (and particularly subterranean parking structures) tend to be of concern regarding CO hotspots, as they are enclosed spaces with frequent cars operating in cold start mode. Approximately 598 parking spaces would be constructed within the mixed-use parking garage. The proposed project would be required to comply with the ventilation requirements of the International Mechanical Code (Section 404 [Enclosed Parking Garages]), which requires that mechanical ventilation systems for enclosed parking garages operate automatically by means of carbon monoxide detectors in conjunction with nitrogen dioxide detectors. Section 404.2 requires a minimum air flow rate of 0.05 cubic feet per second per square foot and the system shall be capable of producing a ventilation airflow rate of 0.75 cubic feet per second per square foot of floor area.[4] Impacts in regards to parking structure CO hotspots would be less than significant.

Localized Carbon Monoxide Hotspots

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or “hot spots,” are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

The SFBAAB is designated as attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan (CMP) and would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where “urban canyons” formed by buildings tend to reduce air circulation. Based on the scope of the proposed project (approximately eight acres of mixed use with 242 dwelling units), traffic would increase along surrounding roadways during long-term operational activities.

However, according to the Traffic Impact Study prepared for the proposed project, the entire project would generate 108 total a.m. peak hour trips and 186 total p.m. peak hour trips. The project study intersection with the highest traffic volumes (Stevens Creek Boulevard/ Mary Avenue) would have 3,055 vehicles during the morning peak hour and 3,752 vehicles during the evening peak hour. Therefore, the project would not involve intersections with more than 24,000 or 44,000 vehicles per hour. As a result, the project would not generate a significant number of vehicle trips and impacts associated with CO concentrations would be less than significant.

The City’s General Plan EIR determined that development of future individual projects would be required to achieve the incremental risk thresholds established by BAAQMD, and impacts would be less than significant. As described above, the proposed project would not expose sensitive receptors to substantial

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[4] International Code Council, *International Mechanical Code*, *Chapter 4 Ventilation*, 2015. https://codes.iccsafe.org/public/document/IMC2015/chapter-4-ventilation, accessed August 15, 2018.

pollutant concentrations. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

Level of Significance: Less than significant impact.

Threshold 5.5 Would the project create objectionable odors affecting a substantial number of people?

Construction Odors

According to the BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The proposed project does not include any uses identified by the BAAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Any construction-related odors would be short-term in nature and cease upon project completion. As a result, impacts to existing adjacent land uses from construction-related odors would be short-term in duration and therefore would be less than significant.

Operational Odors

The proposed project would include on-site kitchen facilities to support the two of age-restricted housing communities. Odors from kitchen facilities usually emanate from charbroilers, griddles, and deep fat fryers. Odors are typically regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health, or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

In addition, BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants. BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. It should be noted that restaurant related odors are not identified by BAAQMD as nuisance odors since they typically do not generate significant odors that affect a substantial number of people. Larger restaurants that employ five or more people are subject to BAAQMD Regulation 7. Regulation 7 disallows discharge of any odorous substance which causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air.

As a result, the proposed project does not include land uses identified by the BAAQMD as generating significant odors and the proposed project would be subject to Rule 1-301 (Public Nuisance). Therefore, impacts would be less than significant.

The City's General Plan EIR determined that development of future individual projects would result in less than significant impacts with adherence to BAAQMD Regulation 7. As described above, the proposed project would comply with BAAQMD Regulation 7 and would not generate substantial odors or expose receptors odors. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

Level of Significance: Less than significant impact.

6 REFERENCES

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2. Bay Area Air Quality Management District, *CEQA Air Quality Guidelines,* 2017.
3. Bay Area Air Quality Management District, *Clean Air Plan*, 2017.
4. Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status,* 2017.
5. Bay Area Air Quality Management District, *Current Rules*, 2017.
6. C2K Architecture, Inc., *Architectural Site Plan,* 2018.
7. California Air Pollution Control Officers Association (CAPCOA), *Health Risk Assessments for Proposed Land Use Projects*, 2009.
8. California Air Resources Board (CARB), *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, 2000.
9. California Air Resources Board (CARB), *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
10. California Air Resources Board (CARB), *Current Air Quality Standards*, 2016.
11. California Air Resources Board (CARB), *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2014 to 2016*, 2018.
12. City of Cupertino, *Climate Action Plan Update*, 2016.
13. Federal Highway Administration*, Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,* 2016.
14. Kimley-Horn and Associates, *Transportation Analysis Memorandum,* 2018.
15. Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Risk Assessment Guidelines*, 2015
16. United States Environmental Protection Agency (U.S. EPA), *NAAQS Table*, 2016.
17. United States Environmental Protection Agency (U.S. EPA), *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.

Appendix A

Air Quality Modeling Data

Westport

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	232.00	Space	2.09	92,800.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on information from applicant

Land Use - Based on applicants information
Low Rise: Townhomes and Rowhomes

Construction Phase - Anticipated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Anticipated equipment

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Square-footage of existing shopping center

Grading - Anticipated excavation for parking garage

Architectural Coating -

Vehicle Trips - Based on Trip Generation Table

Woodstoves - Prohibited per BAAQMD Regulation 6, Rule 3

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Per BAAQMD basic control measures

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	30.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	300.00	381.00
tblConstructionPhase	NumDays	20.00	109.00

tblConstructionPhase	PhaseEndDate	8/6/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	8/20/2019	2/13/2019
tblConstructionPhase	PhaseEndDate	10/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	12/22/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	11/24/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/19/2021	12/31/2020
tblConstructionPhase	PhaseStartDate	7/10/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	8/7/2019	1/31/2019
tblConstructionPhase	PhaseStartDate	8/21/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	11/25/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	10/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	12/23/2020	8/1/2020
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5389	6.2680	3.8177	0.0108	0.7302	0.2313	0.9615	0.2733	0.2149	0.4881	0.0000	997.8489	997.8489	0.1579	0.0000	1,001.7966
2020	3.9450	3.4618	3.3626	8.1000e-003	0.3139	0.1580	0.4718	0.0845	0.1489	0.2334	0.0000	726.1599	726.1599	0.0889	0.0000	728.3830
Maximum	**3.9450**	**6.2680**	**3.8177**	**0.0108**	**0.7302**	**0.2313**	**0.9615**	**0.2733**	**0.2149**	**0.4881**	**0.0000**	**997.8489**	**997.8489**	**0.1579**	**0.0000**	**1,001.7966**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5389	6.2680	3.8177	0.0108	0.4271	0.2313	0.6584	0.1483	0.2149	0.3631	0.0000	997.8483	997.8483	0.1579	0.0000	1,001.7961
2020	3.9450	3.4618	3.3626	8.1000e-003	0.2980	0.1580	0.4560	0.0806	0.1489	0.2295	0.0000	726.1595	726.1595	0.0889	0.0000	728.3826
Maximum	**3.9450**	**6.2680**	**3.8177**	**0.0108**	**0.4271**	**0.2313**	**0.6584**	**0.1483**	**0.2149**	**0.3631**	**0.0000**	**997.8483**	**997.8483**	**0.1579**	**0.0000**	**1,001.7961**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.55**	**0.00**	**22.26**	**36.03**	**0.00**	**17.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**7-10-2019**	**10-9-2019**	0.9988	0.9988
2	**10-10-2019**	**1-9-2020**	1.0398	1.0398
3	**1-10-2020**	**4-9-2020**	0.9398	0.9398
4	**4-10-2020**	**7-9-2020**	0.9326	0.9326
5	**7-10-2020**	**9-30-2020**	2.3033	2.3033
		Highest	2.3033	2.3033

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3891	0.0276	1.9807	6.8000e-004		0.0384	0.0384		0.0384	0.0384	3.7744	7.4734	11.2478	0.0206	8.0000e-005	11.7879
Energy	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	645.6476	645.6476	0.0260	7.1600e-003	648.4298
Mobile	0.5548	2.2399	6.1817	0.0187	1.6140	0.0189	1.6329	0.4321	0.0177	0.4498	0.0000	1,713.5087	1,713.5087	0.0639	0.0000	1,715.1052
Waste						0.0000	0.0000		0.0000	0.0000	26.8598	0.0000	26.8598	1.5874	0.0000	66.5439
Water						0.0000	0.0000		0.0000	0.0000	5.4722	38.1972	43.6694	0.5638	0.0136	61.8251
Total	**2.9565**	**2.3753**	**8.2093**	**0.0201**	**1.6140**	**0.0661**	**1.6800**	**0.4321**	**0.0649**	**0.4969**	**36.1064**	**2,404.8269**	**2,440.9333**	**2.2616**	**0.0209**	**2,503.6919**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3701	0.0248	1.8079	1.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	7.4734	7.4734	2.9700e-003	8.0000e-005	7.5724
Energy	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	645.6476	645.6476	0.0260	7.1600e-003	648.4298
Mobile	0.4881	1.7632	4.5022	0.0120	0.9906	0.0125	1.0031	0.2652	0.0117	0.2769	0.0000	1,101.2386	1,101.2386	0.0466	0.0000	1,102.4039
Waste						0.0000	0.0000		0.0000	0.0000	13.4299	0.0000	13.4299	0.7937	0.0000	33.2720
Water						0.0000	0.0000		0.0000	0.0000	4.3778	32.0931	36.4708	0.4511	0.0109	51.0014

Total	**2.8708**	**1.8958**	**6.3569**	**0.0129**	**0.9906**	**0.0315**	**1.0221**	**0.2652**	**0.0307**	**0.2959**	**17.8077**	**1,786.4527**	**1,804.2603**	**1.3203**	**0.0182**	**1,842.6794**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.90**	**20.18**	**22.56**	**36.10**	**38.62**	**52.37**	**39.16**	**38.63**	**52.72**	**40.47**	**50.68**	**25.71**	**26.08**	**41.62**	**12.99**	**26.40**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	
2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 3.14

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	52.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0351	0.0000	0.0351	5.3100e-003	0.0000	5.3100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.3936	0.2427	4.3000e-004		0.0197	0.0197		0.0184	0.0184	0.0000	38.0890	38.0890	0.0106	0.0000	38.3539
Total	**0.0387**	**0.3936**	**0.2427**	**4.3000e-004**	**0.0351**	**0.0197**	**0.0548**	**5.3100e-003**	**0.0184**	**0.0237**	**0.0000**	**38.0890**	**38.0890**	**0.0106**	**0.0000**	**38.3539**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4700e-003	0.0504	9.9600e-003	1.3000e-004	2.7500e-003	1.9000e-004	2.9400e-003	7.5000e-004	1.9000e-004	9.4000e-004	0.0000	12.4845	12.4845	5.9000e-004	0.0000	12.4991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**2.0700e-003**	**0.0509**	**0.0146**	**1.4000e-004**	**4.0600e-003**	**2.0000e-004**	**4.2600e-003**	**1.1000e-003**	**2.0000e-004**	**1.3000e-003**	**0.0000**	**13.6429**	**13.6429**	**6.2000e-004**	**0.0000**	**13.6583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0150	0.0000	0.0150	2.2700e-003	0.0000	2.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.3936	0.2427	4.3000e-004		0.0197	0.0197		0.0184	0.0184	0.0000	38.0889	38.0889	0.0106	0.0000	38.3538
Total	**0.0387**	**0.3936**	**0.2427**	**4.3000e-004**	**0.0150**	**0.0197**	**0.0347**	**2.2700e-003**	**0.0184**	**0.0206**	**0.0000**	**38.0889**	**38.0889**	**0.0106**	**0.0000**	**38.3538**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4700e-003	0.0504	9.9600e-003	1.3000e-004	2.6200e-003	1.9000e-004	2.8200e-003	7.2000e-004	1.9000e-004	9.1000e-004	0.0000	12.4845	12.4845	5.9000e-004	0.0000	12.4991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**2.0700e-003**	**0.0509**	**0.0146**	**1.4000e-004**	**3.8600e-003**	**2.0000e-004**	**4.0700e-003**	**1.0500e-003**	**2.0000e-004**	**1.2500e-003**	**0.0000**	**13.6429**	**13.6429**	**6.2000e-004**	**0.0000**	**13.6583**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.4000e-004	2.5100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6319	0.6319	2.0000e-005	0.0000	0.6323
Total	**3.3000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6319**	**0.6319**	**2.0000e-005**	**0.0000**	**0.6323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0386	0.0000	0.0386	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0386**	**0.0120**	**0.0506**	**0.0212**	**0.0110**	**0.0322**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.4000e-004	2.5100e-003	1.0000e-005	6.8000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.6319	0.6319	2.0000e-005	0.0000	0.6323
Total	**3.3000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**6.8000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6319**	**0.6319**	**2.0000e-005**	**0.0000**	**0.6323**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3855	0.0000	0.3855	0.1588	0.0000	0.1588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2085	2.3989	1.4686	2.7300e-003		0.1048	0.1048		0.0965	0.0965	0.0000	245.0858	245.0858	0.0775	0.0000	247.0244
Total	**0.2085**	**2.3989**	**1.4686**	**2.7300e-003**	**0.3855**	**0.1048**	**0.4904**	**0.1588**	**0.0965**	**0.2553**	**0.0000**	**245.0858**	**245.0858**	**0.0775**	**0.0000**	**247.0244**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0392	1.3427	0.2652	3.4400e-003	0.0731	5.1500e-003	0.0783	0.0201	4.9300e-003	0.0250	0.0000	332.3406	332.3406	0.0156	0.0000	332.7299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.3800e-003	0.0246	7.0000e-005	6.9800e-003	5.0000e-005	7.0300e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.1783	6.1783	1.7000e-004	0.0000	6.1825
Total	**0.0424**	**1.3451**	**0.2898**	**3.5100e-003**	**0.0801**	**5.2000e-003**	**0.0853**	**0.0220**	**4.9700e-003**	**0.0269**	**0.0000**	**338.5189**	**338.5189**	**0.0157**	**0.0000**	**338.9124**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1648	0.0000	0.1648	0.0679	0.0000	0.0679	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2085	2.3989	1.4686	2.7300e-003		0.1048	0.1048		0.0965	0.0965	0.0000	245.0855	245.0855	0.0775	0.0000	247.0241
Total	**0.2085**	**2.3989**	**1.4686**	**2.7300e-003**	**0.1648**	**0.1048**	**0.2697**	**0.0679**	**0.0965**	**0.1644**	**0.0000**	**245.0855**	**245.0855**	**0.0775**	**0.0000**	**247.0241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0392	1.3427	0.2652	3.4400e-003	0.0698	5.1500e-003	0.0750	0.0193	4.9300e-003	0.0242	0.0000	332.3406	332.3406	0.0156	0.0000	332.7299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	3.2000e-003	2.3800e-003	0.0246	7.0000e-005	6.6200e-003	5.0000e-005	6.6600e-003	1.7700e-003	4.0000e-005	1.8100e-003	0.0000	6.1783	6.1783	1.7000e-004	0.0000	6.1825
Total	**0.0424**	**1.3451**	**0.2898**	**3.5100e-003**	**0.0764**	**5.2000e-003**	**0.0816**	**0.0211**	**4.9700e-003**	**0.0260**	**0.0000**	**338.5189**	**338.5189**	**0.0157**	**0.0000**	**338.9124**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1405	1.2542	1.0212	1.6000e-003		0.0768	0.0768		0.0722	0.0722	0.0000	139.8870	139.8870	0.0341	0.0000	140.7389
Total	**0.1405**	**1.2542**	**1.0212**	**1.6000e-003**		**0.0768**	**0.0768**		**0.0722**	**0.0722**	**0.0000**	**139.8870**	**139.8870**	**0.0341**	**0.0000**	**140.7389**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0152	0.3907	0.1049	8.5000e-004	0.0204	2.8100e-003	0.0232	5.8800e-003	2.6900e-003	8.5700e-003	0.0000	81.3882	81.3882	4.0400e-003	0.0000	81.4892
Worker	0.0517	0.0385	0.3973	1.1000e-003	0.1128	7.4000e-004	0.1135	0.0300	6.9000e-004	0.0307	0.0000	99.8398	99.8398	2.7200e-003	0.0000	99.9077
Total	**0.0668**	**0.4292**	**0.5021**	**1.9500e-003**	**0.1331**	**3.5500e-003**	**0.1367**	**0.0359**	**3.3800e-003**	**0.0393**	**0.0000**	**181.2280**	**181.2280**	**6.7600e-003**	**0.0000**	**181.3969**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1405	1.2542	1.0212	1.6000e-003		0.0768	0.0768		0.0722	0.0722	0.0000	139.8868	139.8868	0.0341	0.0000	140.7388
Total	**0.1405**	**1.2542**	**1.0212**	**1.6000e-003**		**0.0768**	**0.0768**		**0.0722**	**0.0722**	**0.0000**	**139.8868**	**139.8868**	**0.0341**	**0.0000**	**140.7388**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0152	0.3907	0.1049	8.5000e-004	0.0195	2.8100e-003	0.0223	5.6700e-003	2.6900e-003	8.3600e-003	0.0000	81.3882	81.3882	4.0400e-003	0.0000	81.4892
Worker	0.0517	0.0385	0.3973	1.1000e-003	0.1069	7.4000e-004	0.1077	0.0286	6.9000e-004	0.0293	0.0000	99.8398	99.8398	2.7200e-003	0.0000	99.9077
Total	**0.0668**	**0.4292**	**0.5021**	**1.9500e-003**	**0.1264**	**3.5500e-003**	**0.1300**	**0.0342**	**3.3800e-003**	**0.0376**	**0.0000**	**181.2280**	**181.2280**	**6.7600e-003**	**0.0000**	**181.3969**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0270	0.7756	0.2066	1.8600e-003	0.0448	3.8400e-003	0.0487	0.0130	3.6700e-003	0.0166	0.0000	178.0948	178.0948	8.1700e-003	0.0000	178.2990
Worker	0.1040	0.0747	0.7836	2.3600e-003	0.2483	1.6000e-003	0.2499	0.0660	1.4800e-003	0.0675	0.0000	212.9480	212.9480	5.2200e-003	0.0000	213.0786
Total	**0.1310**	**0.8504**	**0.9901**	**4.2200e-003**	**0.2931**	**5.4400e-003**	**0.2986**	**0.0790**	**5.1500e-003**	**0.0842**	**0.0000**	**391.0428**	**391.0428**	**0.0134**	**0.0000**	**391.3776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0270	0.7756	0.2066	1.8600e-003	0.0429	3.8400e-003	0.0468	0.0125	3.6700e-003	0.0162	0.0000	178.0948	178.0948	8.1700e-003	0.0000	178.2990
Worker	0.1040	0.0747	0.7836	2.3600e-003	0.2354	1.6000e-003	0.2370	0.0629	1.4800e-003	0.0644	0.0000	212.9480	212.9480	5.2200e-003	0.0000	213.0786
Total	**0.1310**	**0.8504**	**0.9901**	**4.2200e-003**	**0.2784**	**5.4400e-003**	**0.2838**	**0.0754**	**5.1500e-003**	**0.0805**	**0.0000**	**391.0428**	**391.0428**	**0.0134**	**0.0000**	**391.3776**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1677	0.1613	2.5000e-004		9.0700e-003	9.0700e-003		8.3400e-003	8.3400e-003	0.0000	22.5227	22.5227	7.1300e-003	0.0000	22.7009
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1677**	**0.1613**	**2.5000e-004**		**9.0700e-003**	**9.0700e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**22.5227**	**22.5227**	**7.1300e-003**	**0.0000**	**22.7009**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**6.0000e-004**	**4.5000e-004**	**4.6100e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1584**	**1.1584**	**3.0000e-005**	**0.0000**	**1.1592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1677	0.1613	2.5000e-004		9.0700e-003	9.0700e-003		8.3400e-003	8.3400e-003	0.0000	22.5227	22.5227	7.1300e-003	0.0000	22.7008
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1677**	**0.1613**	**2.5000e-004**		**9.0700e-003**	**9.0700e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**22.5227**	**22.5227**	**7.1300e-003**	**0.0000**	**22.7008**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**6.0000e-004**	**4.5000e-004**	**4.6100e-003**	**1.0000e-005**	**1.2400e-003**	**1.0000e-005**	**1.2500e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1584**	**1.1584**	**3.0000e-005**	**0.0000**	**1.1592**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5144					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**3.5276**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6900e-003	6.2400e-003	0.0655	2.0000e-004	0.0208	1.3000e-004	0.0209	5.5200e-003	1.2000e-004	5.6400e-003	0.0000	17.7927	17.7927	4.4000e-004	0.0000	17.8036

Total	**8.6900e-003**	**6.2400e-003**	**0.0655**	**2.0000e-004**	**0.0208**	**1.3000e-004**	**0.0209**	**5.5200e-003**	**1.2000e-004**	**5.6400e-003**	**0.0000**	**17.7927**	**17.7927**	**4.4000e-004**	**0.0000**	**17.8036**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5144					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**3.5276**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6900e-003	6.2400e-003	0.0655	2.0000e-004	0.0197	1.3000e-004	0.0198	5.2500e-003	1.2000e-004	5.3800e-003	0.0000	17.7927	17.7927	4.4000e-004	0.0000	17.8036
Total	**8.6900e-003**	**6.2400e-003**	**0.0655**	**2.0000e-004**	**0.0197**	**1.3000e-004**	**0.0198**	**5.2500e-003**	**1.2000e-004**	**5.3800e-003**	**0.0000**	**17.7927**	**17.7927**	**4.4000e-004**	**0.0000**	**17.8036**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4881	1.7632	4.5022	0.0120	0.9906	0.0125	1.0031	0.2652	0.0117	0.2769	0.0000	1,101.2386	1,101.2386	0.0466	0.0000	1,102.4039
Unmitigated	0.5548	2.2399	6.1817	0.0187	1.6140	0.0189	1.6329	0.4321	0.0177	0.4498	0.0000	1,713.5087	1,713.5087	0.0639	0.0000	1,715.1052

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	534.16	1,446,817	887,991
Apartments Mid Rise	625.60	734.85	673.90	1,496,873	918,713
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	76.05	291,199	178,725
Strip Mall	755.00	840.80	408.60	1,105,392	678,439
Total	2,170.23	2,284.90	1,692.71	4,340,280	2,663,868

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	520.9796	520.9796	0.0236	4.8700e-003	523.0209
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	520.9796	520.9796	0.0236	4.8700e-003	523.0209
NaturalGas Mitigated	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6680	124.6680	2.3900e-003	2.2900e-003	125.4089
NaturalGas Unmitigated	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6680	124.6680	2.3900e-003	2.2900e-003	125.4089

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Apartments Mid Rise	993537	5.3600e-003	0.0458	0.0195	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	53.0189	53.0189	1.0200e-003	9.7000e-004	53.3340
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	397755	2.1400e-003	0.0183	7.8000e-003	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.2257	21.2257	4.1000e-004	3.9000e-004	21.3519
Strip Mall	47400	2.6000e-004	2.3200e-003	1.9500e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5294	2.5294	5.0000e-005	5.0000e-005	2.5445
Total		**0.0126**	**0.1078**	**0.0468**	**6.8000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.6680**	**124.6680**	**2.4000e-003**	**2.2900e-003**	**125.4089**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Apartments Mid Rise	993537	5.3600e-003	0.0458	0.0195	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	53.0189	53.0189	1.0200e-003	9.7000e-004	53.3340
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Retirement Community	397755	2.1400e-003	0.0183	7.8000e-003	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.2257	21.2257	4.1000e-004	3.9000e-004	21.3519
Strip Mall	47400	2.6000e-004	2.3200e-003	1.9500e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5294	2.5294	5.0000e-005	5.0000e-005	2.5445
Total		**0.0126**	**0.1078**	**0.0468**	**6.8000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.6680**	**124.6680**	**2.4000e-003**	**2.2900e-003**	**125.4089**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664
Apartments Mid Rise	474760	138.1132	6.2500e-003	1.2900e-003	138.6544
Enclosed Parking Structure	526176	153.0706	6.9200e-003	1.4300e-003	153.6704
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	177042	51.5036	2.3300e-003	4.8000e-004	51.7054
Strip Mall	213800	62.1969	2.8100e-003	5.8000e-004	62.4406
Total		**520.9796**	**0.0236**	**4.8600e-003**	**523.0209**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664

Apartments Mid Rise	474760	138.1132	6.2500e-003	1.2900e-003	138.6544
Enclosed Parking Structure	526176	153.0706	6.9200e-003	1.4300e-003	153.6704
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	177042	51.5036	2.3300e-003	4.8000e-004	51.7054
Strip Mall	213800	62.1969	2.8100e-003	5.8000e-004	62.4406
Total		**520.9796**	**0.0236**	**4.8600e-003**	**523.0209**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3701	0.0248	1.8079	1.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	7.4734	7.4734	2.9700e-003	8.0000e-005	7.5724
Unmitigated	2.3891	0.0276	1.9807	6.8000e-004		0.0384	0.0384		0.0384	0.0384	3.7744	7.4734	11.2478	0.0206	8.0000e-005	11.7879

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0195	6.7300e-003	0.1745	5.9000e-004		0.0285	0.0285		0.0285	0.0285	3.7744	4.5317	8.3061	0.0177	8.0000e-005	8.7741
Landscaping	0.0552	0.0209	1.8063	1.0000e-004		9.9300e-003	9.9300e-003		9.9300e-003	9.9300e-003	0.0000	2.9418	2.9418	2.8800e-003	0.0000	3.0138
Total	**2.3891**	**0.0276**	**1.9807**	**6.9000e-004**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**3.7744**	**7.4734**	**11.2478**	**0.0206**	**8.0000e-005**	**11.7879**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.6000e-004	3.9100e-003	1.6700e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5317	4.5317	9.0000e-005	8.0000e-005	4.5586
Landscaping	0.0552	0.0209	1.8063	1.0000e-004		9.9300e-003	9.9300e-003		9.9300e-003	9.9300e-003	0.0000	2.9418	2.9418	2.8800e-003	0.0000	3.0138
Total	**2.3701**	**0.0248**	**1.8079**	**1.2000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**	**0.0000**	**7.4734**	**7.4734**	**2.9700e-003**	**8.0000e-005**	**7.5724**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.4708	0.4511	0.0109	51.0014
Unmitigated	43.6694	0.5638	0.0136	61.8251

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.73355 / 3.61463	14.5247	0.1874	4.5300e-003	20.5598
Apartments Mid Rise	7.49271 / 4.72367	18.9811	0.2449	5.9200e-003	26.8679
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.54101 / 1.60194	6.4371	0.0831	2.0100e-003	9.1117
Strip Mall	1.48145 / 0.907986	3.7265	0.0484	1.1700e-003	5.2857
Total		**43.6694**	**0.5638**	**0.0136**	**61.8251**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.58684 / 3.39414	12.1313	0.1500	3.6300e-003	16.9614
Apartments Mid Rise	5.99417 / 4.43552	15.8534	0.1960	4.7400e-003	22.1655
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.03281 / 1.50422	5.3764	0.0665	1.6100e-003	7.5170
Strip Mall	1.18516 / 0.852599	3.1097	0.0387	9.4000e-004	4.3576
Total		**36.4708**	**0.4511**	**0.0109**	**51.0014**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.4299	0.7937	0.0000	33.2720

Unmitigated	26.8598	1.5874	0.0000	66.5439

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	40.48	8.2171	0.4856	0.0000	20.3575
Apartments Mid Rise	52.9	10.7382	0.6346	0.0000	26.6035
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	17.94	3.6417	0.2152	0.0000	9.0221
Strip Mall	21	4.2628	0.2519	0.0000	10.5609
Total		**26.8598**	**1.5874**	**0.0000**	**66.5439**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	20.24	4.1085	0.2428	0.0000	10.1787
Apartments Mid Rise	26.45	5.3691	0.3173	0.0000	13.3018

Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	8.97	1.8208	0.1076	0.0000	4.5110
Strip Mall	10.5	2.1314	0.1260	0.0000	5.2805
Total		**13.4299**	**0.7937**	**0.0000**	**33.2720**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Westport

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	232.00	Space	2.09	92,800.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on information from applicant

Land Use - Based on applicants information

Low Rise: Townhomes and Rowhomes

Construction Phase - Anticipated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Anticipated equipment

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Square-footage of existing shopping center

Grading - Anticipated excavation for parking garage

Architectural Coating -

Vehicle Trips - Based on Trip Generation Table

Woodstoves - Prohibited per BAAQMD Regulation 6, Rule 3

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Per BAAQMD basic control measures

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	30.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	300.00	381.00
tblConstructionPhase	NumDays	20.00	109.00

tblConstructionPhase	PhaseEndDate	8/6/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	8/20/2019	2/13/2019
tblConstructionPhase	PhaseEndDate	10/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	12/22/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	11/24/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/19/2021	12/31/2020
tblConstructionPhase	PhaseStartDate	7/10/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	8/7/2019	1/31/2019
tblConstructionPhase	PhaseStartDate	8/21/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	11/25/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	10/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	12/23/2020	8/1/2020
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.6953	84.4564	39.8173	0.1423	18.2141	2.4999	20.6054	9.9699	2.3041	12.1699	0.0000	14,690.7429	14,690.7429	2.3290	0.0000	14,748.9669
2020	68.0467	27.3301	28.0544	0.0674	2.7097	1.2718	3.9815	0.7267	1.2027	1.9294	0.0000	6,662.5036	6,662.5036	0.7677	0.0000	6,681.6964
Maximum	**68.0467**	**84.4564**	**39.8173**	**0.1423**	**18.2141**	**2.4999**	**20.6054**	**9.9699**	**2.3041**	**12.1699**	**0.0000**	**14,690.7429**	**14,690.7429**	**2.3290**	**0.0000**	**14,748.9669**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.6953	84.4564	39.8173	0.1423	7.8635	2.4999	10.2548	4.2827	2.3041	6.4827	0.0000	14,690.7429	14,690.7429	2.3290	0.0000	14,748.9669
2020	68.0467	27.3301	28.0544	0.0674	2.5717	1.2718	3.8435	0.6928	1.2027	1.8955	0.0000	6,662.5036	6,662.5036	0.7677	0.0000	6,681.6964
Maximum	**68.0467**	**84.4564**	**39.8173**	**0.1423**	**7.8635**	**2.4999**	**10.2548**	**4.2827**	**2.3041**	**6.4827**	**0.0000**	**14,690.7429**	**14,690.7429**	**2.3290**	**0.0000**	**14,748.9669**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.13**	**0.00**	**42.66**	**53.48**	**0.00**	**40.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Area	16.0724	1.3338	44.8435	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8540	1,522.1702	2.8074	0.0164	1,597.2546
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.9028	13.2398	39.1989	0.1213	10.1871	0.1152	10.3023	2.7194	0.1081	2.8274		12,222.9532	12,222.9532	0.4342		12,233.8090
Total	**20.0442**	**15.1642**	**84.2990**	**0.2105**	**10.1871**	**4.3226**	**14.5097**	**2.7194**	**4.3155**	**7.0348**	**589.3162**	**13,908.8098**	**14,498.1260**	**3.2561**	**0.0303**	**14,588.5410**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.3773	0.9346	20.3685	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8540	932.8540	0.0525	0.0164	939.0651
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.4840	10.5072	27.5733	0.0779	6.2524	0.0762	6.3285	1.6690	0.0714	1.7404		7,848.8745	7,848.8745	0.3116		7,856.6644
Total	**16.9304**	**12.0324**	**48.1984**	**0.0872**	**6.2524**	**0.2909**	**6.5433**	**1.6690**	**0.2861**	**1.9552**	**0.0000**	**9,534.7311**	**9,534.7311**	**0.3785**	**0.0303**	**9,553.2069**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**15.53**	**20.65**	**42.82**	**58.58**	**38.62**	**93.27**	**54.90**	**38.62**	**93.37**	**72.21**	**100.00**	**31.45**	**34.23**	**88.38**	**0.00**	**34.52**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	

2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 3.14

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	52.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1881	0.0000	3.1881	0.4827	0.0000	0.4827			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451

Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**3.1881**	**1.7949**	**4.9830**	**0.4827**	**1.6697**	**2.1524**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1323	4.4910	0.8758	0.0118	0.2574	0.0175	0.2748	0.0705	0.0167	0.0872		1,259.8364	1,259.8364	0.0574		1,261.2707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.1893**	**4.5272**	**1.3348**	**0.0131**	**0.3806**	**0.0183**	**0.3988**	**0.1032**	**0.0174**	**0.1206**		**1,384.6331**	**1,384.6331**	**0.0608**		**1,386.1519**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3629	0.0000	1.3629	0.2064	0.0000	0.2064			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**1.3629**	**1.7949**	**3.1578**	**0.2064**	**1.6697**	**1.8760**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1323	4.4910	0.8758	0.0118	0.2457	0.0175	0.2631	0.0677	0.0167	0.0844		1,259.8364	1,259.8364	0.0574		1,261.2707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1168	7.9000e-004	0.1176	0.0311	7.2000e-004	0.0318		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.1893**	**4.5272**	**1.3348**	**0.0131**	**0.3625**	**0.0183**	**0.3807**	**0.0988**	**0.0174**	**0.1162**		**1,384.6331**	**1,384.6331**	**0.0608**		**1,386.1519**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0435	0.5508	1.5000e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		149.7561	149.7561	4.0500e-003		149.8574
Total	**0.0685**	**0.0435**	**0.5508**	**1.5000e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**149.7561**	**149.7561**	**4.0500e-003**		**149.8574**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0435	0.5508	1.5000e-003	0.1402	9.4000e-004	0.1411	0.0373	8.7000e-004	0.0382		149.7561	149.7561	4.0500e-003		149.8574

Total	**0.0685**	**0.0435**	**0.5508**	**1.5000e-003**	**0.1402**	**9.4000e-004**	**0.1411**	**0.0373**	**8.7000e-004**	**0.0382**		**149.7561**	**149.7561**	**4.0500e-003**		**149.8574**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7620	0.0000	8.7620	3.6099	0.0000	3.6099			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.7620**	**2.3827**	**11.1447**	**3.6099**	**2.1920**	**5.8020**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8803	29.8879	5.8286	0.0787	1.7128	0.1162	1.8289	0.4694	0.1111	0.5805		8,384.3278	8,384.3278	0.3818		8,393.8733
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0484	0.6120	1.6700e-003	0.1643	1.0500e-003	0.1653	0.0436	9.6000e-004	0.0445		166.3956	166.3956	4.5000e-003		166.5083
Total	**0.9564**	**29.9362**	**6.4405**	**0.0803**	**1.8771**	**0.1172**	**1.9943**	**0.5130**	**0.1121**	**0.6251**		**8,550.7234**	**8,550.7234**	**0.3863**		**8,560.3815**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7458	0.0000	3.7458	1.5432	0.0000	1.5432			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7458**	**2.3827**	**6.1284**	**1.5432**	**2.1920**	**3.7353**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8803	29.8879	5.8286	0.0787	1.6350	0.1162	1.7512	0.4503	0.1111	0.5615		8,384.3278	8,384.3278	0.3818		8,393.8733
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0484	0.6120	1.6700e-003	0.1557	1.0500e-003	0.1568	0.0415	9.6000e-004	0.0424		166.3956	166.3956	4.5000e-003		166.5083
Total	**0.9564**	**29.9362**	**6.4405**	**0.0803**	**1.7907**	**0.1172**	**1.9080**	**0.4918**	**0.1121**	**0.6039**		**8,550.7234**	**8,550.7234**	**0.3863**		**8,560.3815**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2505	6.4746	1.6590	0.0144	0.3520	0.0469	0.3989	0.1013	0.0449	0.1462		1,523.7933	1,523.7933	0.0723		1,525.6010
Worker	0.9089	0.5777	7.3128	0.0200	1.9633	0.0125	1.9758	0.5208	0.0115	0.5323		1,988.4277	1,988.4277	0.0538		1,989.7736
Total	**1.1594**	**7.0523**	**8.9718**	**0.0344**	**2.3154**	**0.0594**	**2.3748**	**0.6221**	**0.0564**	**0.6785**		**3,512.2210**	**3,512.2210**	**0.1261**		**3,515.3746**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2505	6.4746	1.6590	0.0144	0.3370	0.0469	0.3839	0.0976	0.0449	0.1425		1,523.7933	1,523.7933	0.0723		1,525.6010
Worker	0.9089	0.5777	7.3128	0.0200	1.8610	0.0125	1.8735	0.4956	0.0115	0.5072		1,988.4277	1,988.4277	0.0538		1,989.7736
Total	**1.1594**	**7.0523**	**8.9718**	**0.0344**	**2.1979**	**0.0594**	**2.2573**	**0.5933**	**0.0564**	**0.6497**		**3,512.2210**	**3,512.2210**	**0.1261**		**3,515.3746**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2020	5.8477	1.4810	0.0143	0.3521	0.0291	0.3812	0.1014	0.0279	0.1292		1,514.7542	1,514.7542	0.0665		1,516.4155
Worker	0.8307	0.5101	6.5733	0.0193	1.9633	0.0123	1.9756	0.5208	0.0113	0.5321		1,926.3553	1,926.3553	0.0471		1,927.5338
Total	**1.0328**	**6.3578**	**8.0543**	**0.0337**	**2.3154**	**0.0414**	**2.3568**	**0.6221**	**0.0392**	**0.6613**		**3,441.1095**	**3,441.1095**	**0.1136**		**3,443.9493**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.2020	5.8477	1.4810	0.0143	0.3370	0.0291	0.3661	0.0977	0.0279	0.1255		1,514.7542	1,514.7542	0.0665		1,516.4155
Worker	0.8307	0.5101	6.5733	0.0193	1.8610	0.0123	1.8732	0.4956	0.0113	0.5069		1,926.3553	1,926.3553	0.0471		1,927.5338
Total	**1.0328**	**6.3578**	**8.0543**	**0.0337**	**2.1979**	**0.0414**	**2.2393**	**0.5933**	**0.0392**	**0.6324**		**3,441.1095**	**3,441.1095**	**0.1136**		**3,443.9493**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.0570**	**0.0363**	**0.4590**	**1.2500e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.2000e-004**	**0.0334**		**124.7967**	**124.7967**	**3.3800e-003**		**124.8812**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1168	7.9000e-004	0.1176	0.0311	7.2000e-004	0.0318		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.0570**	**0.0363**	**0.4590**	**1.2500e-003**	**0.1168**	**7.9000e-004**	**0.1176**	**0.0311**	**7.2000e-004**	**0.0318**		**124.7967**	**124.7967**	**3.3800e-003**		**124.8812**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**64.7272**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1668	0.1025	1.3202	3.8800e-003	0.3943	2.4600e-003	0.3968	0.1046	2.2700e-003	0.1069		386.8831	386.8831	9.4700e-003		387.1198
Total	**0.1668**	**0.1025**	**1.3202**	**3.8800e-003**	**0.3943**	**2.4600e-003**	**0.3968**	**0.1046**	**2.2700e-003**	**0.1069**		**386.8831**	**386.8831**	**9.4700e-003**		**387.1198**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**64.7272**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1668	0.1025	1.3202	3.8800e-003	0.3738	2.4600e-003	0.3762	0.0995	2.2700e-003	0.1018		386.8831	386.8831	9.4700e-003		387.1198
Total	**0.1668**	**0.1025**	**1.3202**	**3.8800e-003**	**0.3738**	**2.4600e-003**	**0.3762**	**0.0995**	**2.2700e-003**	**0.1018**		**386.8831**	**386.8831**	**9.4700e-003**		**387.1198**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	3.4840	10.5072	27.5733	0.0779	6.2524	0.0762	6.3285	1.6690	0.0714	1.7404		7,848.8745	7,848.8745	0.3116		7,856.6644
Unmitigated	3.9028	13.2398	39.1989	0.1213	10.1871	0.1152	10.3023	2.7194	0.1081	2.8274		12,222.9532	12,222.9532	0.4342		12,233.8090

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	534.16	1,446,817	887,991
Apartments Mid Rise	625.60	734.85	673.90	1,496,873	918,713
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	76.05	291,199	178,725
Strip Mall	755.00	840.80	408.60	1,105,392	678,439
Total	2,170.23	2,284.90	1,692.71	4,340,280	2,663,868

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
NaturalGas Unmitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2458.9	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2722.02	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1089.74	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	129.863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2.4589	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2.72202	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1.08974	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	0.129863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.3773	0.9346	20.3685	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8540	932.8540	0.0525	0.0164	939.0651
Unmitigated	16.0724	1.3338	44.8435	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8540	1,522.1702	2.8074	0.0164	1,597.2546

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.7773	1.1018	24.7739	0.0843		4.0495	4.0495		4.0495	4.0495	589.3162	896.8235	1,486.1397	2.7721	0.0164	1,560.3425
Landscaping	0.6136	0.2320	20.0696	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0304	36.0304	0.0353		36.9122
Total	**16.0724**	**1.3338**	**44.8435**	**0.0854**		**4.1597**	**4.1597**		**4.1597**	**4.1597**	**589.3162**	**932.8540**	**1,522.1702**	**2.8074**	**0.0164**	**1,597.2547**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0822	0.7025	0.2989	4.4800e-003		0.0568	0.0568		0.0568	0.0568	0.0000	896.8235	896.8235	0.0172	0.0164	902.1529
Landscaping	0.6136	0.2320	20.0696	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0304	36.0304	0.0353		36.9122
Total	**13.3774**	**0.9345**	**20.3685**	**5.5400e-003**		**0.1671**	**0.1671**		**0.1671**	**0.1671**	**0.0000**	**932.8540**	**932.8540**	**0.0525**	**0.0164**	**939.0651**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Westport

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	232.00	Space	2.09	92,800.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on information from applicant

Land Use - Based on applicants information
Low Rise: Townhomes and Rowhomes

Construction Phase - Anticipated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Anticipated equipment

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Square-footage of existing shopping center

Grading - Anticipated excavation for parking garage

Architectural Coating -

Vehicle Trips - Based on Trip Generation Table

Woodstoves - Prohibited per BAAQMD Regulation 6, Rule 3

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Per BAAQMD basic control measures

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	30.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	300.00	381.00
tblConstructionPhase	NumDays	20.00	109.00

tblConstructionPhase	PhaseEndDate	8/6/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	8/20/2019	2/13/2019
tblConstructionPhase	PhaseEndDate	10/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	12/22/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	11/24/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/19/2021	12/31/2020
tblConstructionPhase	PhaseStartDate	7/10/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	8/7/2019	1/31/2019
tblConstructionPhase	PhaseStartDate	8/21/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	11/25/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	10/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	12/23/2020	8/1/2020
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.7250	85.2206	40.2499	0.1409	18.2141	2.5021	20.6054	9.9699	2.3063	12.1699	0.0000	14,538.2744	14,538.2744	2.3478	0.0000	14,596.9697
2020	68.1208	27.5333	27.6813	0.0652	2.7097	1.2723	3.9820	0.7267	1.2031	1.9298	0.0000	6,435.9503	6,435.9503	0.7689	0.0000	6,455.1728
Maximum	**68.1208**	**85.2206**	**40.2499**	**0.1409**	**18.2141**	**2.5021**	**20.6054**	**9.9699**	**2.3063**	**12.1699**	**0.0000**	**14,538.2744**	**14,538.2744**	**2.3478**	**0.0000**	**14,596.9697**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.7250	85.2206	40.2499	0.1409	7.8635	2.5021	10.2548	4.2827	2.3063	6.4827	0.0000	14,538.2744	14,538.2744	2.3478	0.0000	14,596.9697
2020	68.1208	27.5333	27.6813	0.0652	2.5717	1.2723	3.8440	0.6928	1.2031	1.8960	0.0000	6,435.9503	6,435.9503	0.7689	0.0000	6,455.1728
Maximum	**68.1208**	**85.2206**	**40.2499**	**0.1409**	**7.8635**	**2.5021**	**10.2548**	**4.2827**	**2.3063**	**6.4827**	**0.0000**	**14,538.2744**	**14,538.2744**	**2.3478**	**0.0000**	**14,596.9697**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.13**	**0.00**	**42.66**	**53.48**	**0.00**	**40.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day									lb/day					
Area	16.0724	1.3338	44.8435	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8540	1,522.1702	2.8074	0.0164	1,597.2546
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.3862	13.9865	39.5633	0.1130	10.1871	0.1160	10.3031	2.7194	0.1088	2.8282		11,385.0093	11,385.0093	0.4411		11,396.0372
Total	**19.5277**	**15.9110**	**84.6634**	**0.2022**	**10.1871**	**4.3235**	**14.5105**	**2.7194**	**4.3163**	**7.0356**	**589.3162**	**13,070.8659**	**13,660.1821**	**3.2629**	**0.0303**	**13,750.7692**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.3773	0.9346	20.3685	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8540	932.8540	0.0525	0.0164	939.0651
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	2.9774	10.9569	29.3451	0.0725	6.2524	0.0770	6.3293	1.6690	0.0721	1.7412		7,307.4513	7,307.4513	0.3258		7,315.5962
Total	**16.4237**	**12.4821**	**49.9702**	**0.0819**	**6.2524**	**0.2917**	**6.5441**	**1.6690**	**0.2869**	**1.9559**	**0.0000**	**8,993.3079**	**8,993.3079**	**0.3927**	**0.0303**	**9,012.1387**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**15.90**	**21.55**	**40.98**	**59.52**	**38.62**	**93.25**	**54.90**	**38.62**	**93.35**	**72.20**	**100.00**	**31.20**	**34.16**	**87.97**	**0.00**	**34.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	

2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 3.14

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	52.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1881	0.0000	3.1881	0.4827	0.0000	0.4827			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451

Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**3.1881**	**1.7949**	**4.9830**	**0.4827**	**1.6697**	**2.1524**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1360	4.6042	0.9471	0.0116	0.2574	0.0178	0.2752	0.0705	0.0170	0.0876		1,238.9588	1,238.9588	0.0603		1,240.4649
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.1966**	**4.6485**	**1.3747**	**0.0128**	**0.3806**	**0.0186**	**0.3992**	**0.1032**	**0.0178**	**0.1210**		**1,353.6110**	**1,353.6110**	**0.0634**		**1,355.1964**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3629	0.0000	1.3629	0.2064	0.0000	0.2064			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**1.3629**	**1.7949**	**3.1578**	**0.2064**	**1.6697**	**1.8760**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1360	4.6042	0.9471	0.0116	0.2457	0.0178	0.2635	0.0677	0.0170	0.0847		1,238.9588	1,238.9588	0.0603		1,240.4649
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1168	7.9000e-004	0.1176	0.0311	7.2000e-004	0.0318		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.1966**	**4.6485**	**1.3747**	**0.0128**	**0.3625**	**0.0186**	**0.3811**	**0.0988**	**0.0178**	**0.1165**		**1,353.6110**	**1,353.6110**	**0.0634**		**1,355.1964**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.0532	0.5131	1.3800e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		137.5827	137.5827	3.8000e-003		137.6777
Total	**0.0727**	**0.0532**	**0.5131**	**1.3800e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**137.5827**	**137.5827**	**3.8000e-003**		**137.6777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.0532	0.5131	1.3800e-003	0.1402	9.4000e-004	0.1411	0.0373	8.7000e-004	0.0382		137.5827	137.5827	3.8000e-003		137.6777

Total	**0.0727**	**0.0532**	**0.5131**	**1.3800e-003**	**0.1402**	**9.4000e-004**	**0.1411**	**0.0373**	**8.7000e-004**	**0.0382**		**137.5827**	**137.5827**	**3.8000e-003**		**137.6777**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7620	0.0000	8.7620	3.6099	0.0000	3.6099			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.7620**	**2.3827**	**11.1447**	**3.6099**	**2.1920**	**5.8020**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9052	30.6414	6.3030	0.0774	1.7128	0.1184	1.8312	0.4694	0.1133	0.5827		8,245.3852	8,245.3852	0.4010		8,255.4091
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.0591	0.5701	1.5400e-003	0.1643	1.0500e-003	0.1653	0.0436	9.6000e-004	0.0445		152.8697	152.8697	4.2200e-003		152.9752
Total	**0.9861**	**30.7004**	**6.8731**	**0.0789**	**1.8771**	**0.1195**	**1.9965**	**0.5130**	**0.1143**	**0.6273**		**8,398.2550**	**8,398.2550**	**0.4052**		**8,408.3843**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7458	0.0000	3.7458	1.5432	0.0000	1.5432			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7458**	**2.3827**	**6.1284**	**1.5432**	**2.1920**	**3.7353**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9052	30.6414	6.3030	0.0774	1.6350	0.1184	1.7534	0.4503	0.1133	0.5636		8,245.3852	8,245.3852	0.4010		8,255.4091
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.0591	0.5701	1.5400e-003	0.1557	1.0500e-003	0.1568	0.0415	9.6000e-004	0.0424		152.8697	152.8697	4.2200e-003		152.9752
Total	**0.9861**	**30.7004**	**6.8731**	**0.0789**	**1.7907**	**0.1195**	**1.9102**	**0.4918**	**0.1143**	**0.6061**		**8,398.2550**	**8,398.2550**	**0.4052**		**8,408.3843**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2623	6.5661	1.8843	0.0141	0.3520	0.0476	0.3996	0.1013	0.0455	0.1469		1,485.7783	1,485.7783	0.0779		1,487.7263
Worker	0.9658	0.7061	6.8131	0.0184	1.9633	0.0125	1.9758	0.5208	0.0115	0.5323		1,826.7930	1,826.7930	0.0504		1,828.0539
Total	**1.2281**	**7.2722**	**8.6974**	**0.0324**	**2.3154**	**0.0601**	**2.3755**	**0.6221**	**0.0571**	**0.6792**		**3,312.5713**	**3,312.5713**	**0.1284**		**3,315.7802**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2623	6.5661	1.8843	0.0141	0.3370	0.0476	0.3846	0.0976	0.0455	0.1432		1,485.7783	1,485.7783	0.0779		1,487.7263
Worker	0.9658	0.7061	6.8131	0.0184	1.8610	0.0125	1.8735	0.4956	0.0115	0.5072		1,826.7930	1,826.7930	0.0504		1,828.0539
Total	**1.2281**	**7.2722**	**8.6974**	**0.0324**	**2.1979**	**0.0601**	**2.2580**	**0.5933**	**0.0571**	**0.6503**		**3,312.5713**	**3,312.5713**	**0.1284**		**3,315.7802**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2126	5.9152	1.6873	0.0140	0.3521	0.0296	0.3816	0.1014	0.0283	0.1297		1,476.3013	1,476.3013	0.0716		1,478.0905
Worker	0.8836	0.6231	6.0908	0.0178	1.9633	0.0123	1.9756	0.5208	0.0113	0.5321		1,769.7141	1,769.7141	0.0439		1,770.8110
Total	**1.0962**	**6.5383**	**7.7781**	**0.0317**	**2.3154**	**0.0418**	**2.3572**	**0.6221**	**0.0396**	**0.6617**		**3,246.0154**	**3,246.0154**	**0.1154**		**3,248.9014**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.2126	5.9152	1.6873	0.0140	0.3370	0.0296	0.3666	0.0977	0.0283	0.1260		1,476.3013	1,476.3013	0.0716		1,478.0905
Worker	0.8836	0.6231	6.0908	0.0178	1.8610	0.0123	1.8732	0.4956	0.0113	0.5069		1,769.7141	1,769.7141	0.0439		1,770.8110
Total	**1.0962**	**6.5383**	**7.7781**	**0.0317**	**2.1979**	**0.0418**	**2.2398**	**0.5933**	**0.0396**	**0.6329**		**3,246.0154**	**3,246.0154**	**0.1154**		**3,248.9014**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.0606**	**0.0443**	**0.4276**	**1.1500e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.2000e-004**	**0.0334**		**114.6523**	**114.6523**	**3.1700e-003**		**114.7314**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1168	7.9000e-004	0.1176	0.0311	7.2000e-004	0.0318		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.0606**	**0.0443**	**0.4276**	**1.1500e-003**	**0.1168**	**7.9000e-004**	**0.1176**	**0.0311**	**7.2000e-004**	**0.0318**		**114.6523**	**114.6523**	**3.1700e-003**		**114.7314**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**64.7272**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1775	0.1252	1.2233	3.5700e-003	0.3943	2.4600e-003	0.3968	0.1046	2.2700e-003	0.1069		355.4238	355.4238	8.8100e-003		355.6440
Total	**0.1775**	**0.1252**	**1.2233**	**3.5700e-003**	**0.3943**	**2.4600e-003**	**0.3968**	**0.1046**	**2.2700e-003**	**0.1069**		**355.4238**	**355.4238**	**8.8100e-003**		**355.6440**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**64.7272**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1775	0.1252	1.2233	3.5700e-003	0.3738	2.4600e-003	0.3762	0.0995	2.2700e-003	0.1018		355.4238	355.4238	8.8100e-003		355.6440
Total	**0.1775**	**0.1252**	**1.2233**	**3.5700e-003**	**0.3738**	**2.4600e-003**	**0.3762**	**0.0995**	**2.2700e-003**	**0.1018**		**355.4238**	**355.4238**	**8.8100e-003**		**355.6440**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	2.9774	10.9569	29.3451	0.0725	6.2524	0.0770	6.3293	1.6690	0.0721	1.7412		7,307.4513	7,307.4513	0.3258		7,315.5962
Unmitigated	3.3862	13.9865	39.5633	0.1130	10.1871	0.1160	10.3031	2.7194	0.1088	2.8282		11,385.0093	11,385.0093	0.4411		11,396.0372

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	534.16	1,446,817	887,991
Apartments Mid Rise	625.60	734.85	673.90	1,496,873	918,713
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	76.05	291,199	178,725
Strip Mall	755.00	840.80	408.60	1,105,392	678,439
Total	2,170.23	2,284.90	1,692.71	4,340,280	2,663,868

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
NaturalGas Unmitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2458.9	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2722.02	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1089.74	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	129.863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2.4589	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2.72202	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1.08974	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	0.129863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.3773	0.9346	20.3685	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8540	932.8540	0.0525	0.0164	939.0651
Unmitigated	16.0724	1.3338	44.8435	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8540	1,522.1702	2.8074	0.0164	1,597.2546

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.7773	1.1018	24.7739	0.0843		4.0495	4.0495		4.0495	4.0495	589.3162	896.8235	1,486.1397	2.7721	0.0164	1,560.3425
Landscaping	0.6136	0.2320	20.0696	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0304	36.0304	0.0353		36.9122
Total	**16.0724**	**1.3338**	**44.8435**	**0.0854**		**4.1597**	**4.1597**		**4.1597**	**4.1597**	**589.3162**	**932.8540**	**1,522.1702**	**2.8074**	**0.0164**	**1,597.2547**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0822	0.7025	0.2989	4.4800e-003		0.0568	0.0568		0.0568	0.0568	0.0000	896.8235	896.8235	0.0172	0.0164	902.1529
Landscaping	0.6136	0.2320	20.0696	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0304	36.0304	0.0353		36.9122
Total	**13.3774**	**0.9345**	**20.3685**	**5.5400e-003**		**0.1671**	**0.1671**		**0.1671**	**0.1671**	**0.0000**	**932.8540**	**932.8540**	**0.0525**	**0.0164**	**939.0651**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

```
AERSCREEN 16216 / AERMOD 18081                                      07/16/19
                                                                    09:09:04

TITLE: Westport Const-PM2.5


-----------------------------------------------------------------------------
****************************  VOLUME PARAMETERS  ****************************
-----------------------------------------------------------------------------

SOURCE EMISSION RATE:         0.618E-02 g/s             0.491E-01 lb/hr
VOLUME HEIGHT:                     5.00 meters              16.40 feet
INITIAL LATERAL DIMENSION:       180.00 meters             590.55 feet
INITIAL VERTICAL DIMENSION:        1.00 meters               3.28 feet
RURAL OR URBAN:                   URBAN
POPULATION:                     1918000

INITIAL PROBE DISTANCE =          5000. meters             16404. feet



-----------------------------------------------------------------------------
***********************  BUILDING DOWNWASH PARAMETERS  **********************
-----------------------------------------------------------------------------

               BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES


**************************  PROBE ANALYSIS  **************************
                 25 meter receptor spacing: 388. meters - 5000. meters


     Zo       ROUGHNESS       1-HR CONC   DIST      TEMPORAL
     SECTOR     LENGTH         (ug/m3)     (m)       PERIOD
     ----------------------------------------------------------------------
      1*         1.000        0.1143       388.0      ANN
* = worst case flow sector



-----------------------------------------------------------------------------
**********************  MAKEMET METEOROLOGY PARAMETERS  *********************
-----------------------------------------------------------------------------

MIN/MAX TEMPERATURE:    278.0 / 304.0 (K)

MINIMUM WIND SPEED:       0.5 m/s
```

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ANEMOMETER HEIGHT:     10.000 meters

SURFACE CHARACTERISTICS INPUT: USER ENTERED

ALBEDO:                  0.21
BOWEN RATIO:             1.63
ROUGHNESS LENGTH:       1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED


       METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT
       -------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 10  10 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 -1.28  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.63   0.21    0.50

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   304.0    2.0


       METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT
       ---------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 10  10 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 -1.28  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.63   0.21    0.50

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   304.0    2.0


-----------------------------------------------------------------------------
************************ AERSCREEN AUTOMATED DISTANCES **********************
                  OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE
```

```
----------------------------------------------------------------------------------


                  MAXIMUM                              MAXIMUM
        DIST     1-HR CONC                   DIST     1-HR CONC
         (m)      (ug/m3)                     (m)      (ug/m3)
     ---------------------                ---------------------
      388.00    0.1143                    2700.00    0.1108E-01
      400.00    0.1086                    2725.00    0.1102E-01
      425.00    0.9808E-01                2750.00    0.1095E-01
      450.00    0.8910E-01                2775.00    0.1089E-01
      475.00    0.8137E-01                2800.00    0.1083E-01
      500.00    0.7466E-01                2825.00    0.1076E-01
      525.00    0.6879E-01                2850.00    0.1070E-01
      550.00    0.6363E-01                2875.00    0.1064E-01
      575.00    0.5906E-01                2900.00    0.1058E-01
      600.00    0.5500E-01                2925.00    0.1052E-01
      625.00    0.5136E-01                2950.00    0.1046E-01
      650.00    0.4809E-01                2975.00    0.1041E-01
      675.00    0.4515E-01                3000.00    0.1035E-01
      700.00    0.4248E-01                3025.00    0.1029E-01
      725.00    0.4056E-01                3050.00    0.1024E-01
      750.00    0.3883E-01                3075.00    0.1018E-01
      775.00    0.3722E-01                3100.00    0.1013E-01
      800.00    0.3574E-01                3125.00    0.1007E-01
      825.00    0.3435E-01                3150.00    0.1002E-01
      850.00    0.3306E-01                3175.00    0.9966E-02
      875.00    0.3185E-01                3200.00    0.9914E-02
      900.00    0.3073E-01                3225.00    0.9863E-02
      925.00    0.2968E-01                3250.00    0.9812E-02
      950.00    0.2869E-01                3275.00    0.9761E-02
      975.00    0.2777E-01                3300.00    0.9711E-02
     1000.00    0.2690E-01                3325.00    0.9662E-02
     1025.00    0.2609E-01                3350.00    0.9613E-02
     1050.00    0.2533E-01                3375.00    0.9565E-02
     1075.00    0.2461E-01                3400.00    0.9517E-02
     1100.00    0.2393E-01                3425.00    0.9470E-02
     1125.00    0.2330E-01                3450.00    0.9423E-02
     1150.00    0.2270E-01                3475.00    0.9377E-02
     1175.00    0.2213E-01                3500.00    0.9332E-02
     1200.00    0.2160E-01                3525.00    0.9286E-02
     1225.00    0.2110E-01                3550.00    0.9242E-02
     1250.00    0.2063E-01                3575.00    0.9197E-02
     1275.00    0.2018E-01                3600.00    0.9153E-02
     1300.00    0.1976E-01                3625.00    0.9110E-02
     1325.00    0.1935E-01                3650.00    0.9067E-02
     1350.00    0.1898E-01                3675.00    0.9024E-02
     1375.00    0.1862E-01                3700.00    0.8982E-02
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1400.00    0.1828E-01               3725.00    0.8941E-02
1425.00    0.1795E-01               3750.00    0.8899E-02
1450.00    0.1765E-01               3775.00    0.8858E-02
1475.00    0.1736E-01               3800.00    0.8818E-02
1500.00    0.1708E-01               3825.00    0.8778E-02
1525.00    0.1682E-01               3850.00    0.8738E-02
1550.00    0.1657E-01               3875.00    0.8699E-02
1575.00    0.1633E-01               3900.00    0.8660E-02
1600.00    0.1610E-01               3925.00    0.8621E-02
1625.00    0.1589E-01               3950.00    0.8583E-02
1650.00    0.1568E-01               3975.00    0.8545E-02
1675.00    0.1548E-01               4000.00    0.8508E-02
1700.00    0.1529E-01               4025.00    0.8471E-02
1725.00    0.1511E-01               4050.00    0.8434E-02
1750.00    0.1494E-01               4075.00    0.8398E-02
1775.00    0.1477E-01               4100.00    0.8361E-02
1800.00    0.1461E-01               4125.00    0.8326E-02
1825.00    0.1446E-01               4150.00    0.8290E-02
1850.00    0.1431E-01               4175.00    0.8255E-02
1875.00    0.1417E-01               4200.00    0.8220E-02
1900.00    0.1403E-01               4225.00    0.8186E-02
1925.00    0.1390E-01               4250.00    0.8152E-02
1950.00    0.1377E-01               4275.00    0.8118E-02
1975.00    0.1364E-01               4300.00    0.8084E-02
2000.00    0.1352E-01               4325.00    0.8051E-02
2025.00    0.1341E-01               4350.00    0.8018E-02
2050.00    0.1329E-01               4375.00    0.7985E-02
2075.00    0.1318E-01               4400.00    0.7953E-02
2100.00    0.1308E-01               4425.00    0.7921E-02
2125.00    0.1297E-01               4450.00    0.7889E-02
2150.00    0.1287E-01               4475.00    0.7857E-02
2175.00    0.1277E-01               4500.00    0.7826E-02
2200.00    0.1267E-01               4525.00    0.7795E-02
2225.00    0.1257E-01               4550.00    0.7764E-02
2250.00    0.1248E-01               4575.00    0.7734E-02
2275.00    0.1239E-01               4600.00    0.7703E-02
2300.00    0.1230E-01               4625.00    0.7674E-02
2325.00    0.1221E-01               4650.00    0.7644E-02
2350.00    0.1212E-01               4675.00    0.7614E-02
2375.00    0.1204E-01               4700.00    0.7585E-02
2400.00    0.1196E-01               4725.00    0.7556E-02
2425.00    0.1188E-01               4750.00    0.7527E-02
2450.00    0.1180E-01               4775.00    0.7499E-02
2475.00    0.1172E-01               4800.00    0.7470E-02
2500.00    0.1165E-01               4825.00    0.7442E-02
2525.00    0.1157E-01               4850.00    0.7414E-02
2550.00    0.1150E-01               4875.00    0.7387E-02
2575.00    0.1143E-01               4900.00    0.7359E-02
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         2600.00    0.1136E-01               4925.00    0.7332E-02
         2625.00    0.1129E-01               4950.00    0.7305E-02
         2650.00    0.1122E-01               4975.00    0.7278E-02
         2675.00    0.1115E-01               5000.00    0.7252E-02



 -----------------------------------------------------------------------------
 *********************  AERSCREEN MAXIMUM IMPACT SUMMARY  ********************
 -----------------------------------------------------------------------------

                       MAXIMUM      SCALED      SCALED      SCALED      SCALED
                        1-HOUR      3-HOUR      8-HOUR     24-HOUR      ANNUAL
   CALCULATION           CONC        CONC        CONC        CONC        CONC
    PROCEDURE          (ug/m3)     (ug/m3)     (ug/m3)     (ug/m3)     (ug/m3)
 ---------------     ----------  ----------  ----------  ----------  ----------
 FLAT TERRAIN       0.1143      0.1143      0.1029      0.6857E-01  0.1143E-01

 DISTANCE FROM SOURCE        388.00 meters



 IMPACT AT THE
 AMBIENT BOUNDARY   0.1143      0.1143      0.1029      0.6857E-01  0.1143E-01

 DISTANCE FROM SOURCE        388.00 meters
```

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AERSCREEN 16216 / AERMOD 18081                                      07/16/19
                                                                    09:05:09

TITLE: Westport Const-PM10


-----------------------------------------------------------------------------
****************************  VOLUME PARAMETERS  ****************************
-----------------------------------------------------------------------------

SOURCE EMISSION RATE:         0.665E-02 g/s             0.528E-01 lb/hr
VOLUME HEIGHT:                     5.00 meters              16.40 feet
INITIAL LATERAL DIMENSION:       180.00 meters             590.55 feet
INITIAL VERTICAL DIMENSION:        1.00 meters               3.28 feet
RURAL OR URBAN:                   URBAN
POPULATION:                     1918000

INITIAL PROBE DISTANCE =          5000. meters             16404. feet



-----------------------------------------------------------------------------
***********************  BUILDING DOWNWASH PARAMETERS  **********************
-----------------------------------------------------------------------------

               BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES


**************************  PROBE ANALYSIS  ***************************
                 25 meter receptor spacing: 388. meters - 5000. meters


     Zo       ROUGHNESS       1-HR CONC   DIST      TEMPORAL
     SECTOR     LENGTH         (ug/m3)     (m)       PERIOD
     ----------------------------------------------------------------------
      1*         1.000       0.1230       388.0      ANN
* = worst case flow sector



-----------------------------------------------------------------------------
**********************  MAKEMET METEOROLOGY PARAMETERS  *********************
-----------------------------------------------------------------------------

MIN/MAX TEMPERATURE:    278.0 / 304.0 (K)

MINIMUM WIND SPEED:       0.5 m/s
```

```
ANEMOMETER HEIGHT:     10.000 meters

SURFACE CHARACTERISTICS INPUT: USER ENTERED

ALBEDO:                  0.21
BOWEN RATIO:             1.63
ROUGHNESS LENGTH:       1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED


       METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT
       -------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 10  10 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 -1.28  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.63   0.21    0.50

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   304.0    2.0


       METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT
       --------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 10  10 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 -1.28  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.63   0.21    0.50

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   304.0    2.0


-----------------------------------------------------------------------------
*********************** AERSCREEN AUTOMATED DISTANCES **********************
                  OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE
```

```
----------------------------------------------------------------------


               MAXIMUM                              MAXIMUM
       DIST    1-HR CONC                    DIST    1-HR CONC
        (m)     (ug/m3)                      (m)     (ug/m3)
    ---------------------                ---------------------
     388.00    0.1230                    2700.00    0.1193E-01
     400.00    0.1169                    2725.00    0.1186E-01
     425.00    0.1056                    2750.00    0.1179E-01
     450.00    0.9590E-01                2775.00    0.1172E-01
     475.00    0.8758E-01                2800.00    0.1165E-01
     500.00    0.8036E-01                2825.00    0.1158E-01
     525.00    0.7405E-01                2850.00    0.1152E-01
     550.00    0.6849E-01                2875.00    0.1145E-01
     575.00    0.6357E-01                2900.00    0.1139E-01
     600.00    0.5919E-01                2925.00    0.1132E-01
     625.00    0.5528E-01                2950.00    0.1126E-01
     650.00    0.5176E-01                2975.00    0.1120E-01
     675.00    0.4859E-01                3000.00    0.1114E-01
     700.00    0.4572E-01                3025.00    0.1108E-01
     725.00    0.4365E-01                3050.00    0.1102E-01
     750.00    0.4179E-01                3075.00    0.1096E-01
     775.00    0.4007E-01                3100.00    0.1090E-01
     800.00    0.3846E-01                3125.00    0.1084E-01
     825.00    0.3697E-01                3150.00    0.1078E-01
     850.00    0.3558E-01                3175.00    0.1073E-01
     875.00    0.3429E-01                3200.00    0.1067E-01
     900.00    0.3307E-01                3225.00    0.1062E-01
     925.00    0.3194E-01                3250.00    0.1056E-01
     950.00    0.3088E-01                3275.00    0.1051E-01
     975.00    0.2989E-01                3300.00    0.1045E-01
    1000.00    0.2895E-01                3325.00    0.1040E-01
    1025.00    0.2808E-01                3350.00    0.1035E-01
    1050.00    0.2726E-01                3375.00    0.1030E-01
    1075.00    0.2649E-01                3400.00    0.1024E-01
    1100.00    0.2576E-01                3425.00    0.1019E-01
    1125.00    0.2508E-01                3450.00    0.1014E-01
    1150.00    0.2443E-01                3475.00    0.1009E-01
    1175.00    0.2382E-01                3500.00    0.1004E-01
    1200.00    0.2325E-01                3525.00    0.9995E-02
    1225.00    0.2271E-01                3550.00    0.9947E-02
    1250.00    0.2220E-01                3575.00    0.9899E-02
    1275.00    0.2172E-01                3600.00    0.9852E-02
    1300.00    0.2126E-01                3625.00    0.9805E-02
    1325.00    0.2083E-01                3650.00    0.9759E-02
    1350.00    0.2042E-01                3675.00    0.9713E-02
    1375.00    0.2004E-01                3700.00    0.9668E-02
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  1400.00    0.1967E-01               3725.00    0.9623E-02
  1425.00    0.1933E-01               3750.00    0.9579E-02
  1450.00    0.1900E-01               3775.00    0.9535E-02
  1475.00    0.1868E-01               3800.00    0.9491E-02
  1500.00    0.1839E-01               3825.00    0.9448E-02
  1525.00    0.1810E-01               3850.00    0.9405E-02
  1550.00    0.1783E-01               3875.00    0.9363E-02
  1575.00    0.1758E-01               3900.00    0.9321E-02
  1600.00    0.1733E-01               3925.00    0.9280E-02
  1625.00    0.1710E-01               3950.00    0.9238E-02
  1650.00    0.1688E-01               3975.00    0.9198E-02
  1675.00    0.1667E-01               4000.00    0.9157E-02
  1700.00    0.1646E-01               4025.00    0.9117E-02
  1725.00    0.1627E-01               4050.00    0.9078E-02
  1750.00    0.1608E-01               4075.00    0.9039E-02
  1775.00    0.1590E-01               4100.00    0.9000E-02
  1800.00    0.1573E-01               4125.00    0.8961E-02
  1825.00    0.1556E-01               4150.00    0.8923E-02
  1850.00    0.1540E-01               4175.00    0.8885E-02
  1875.00    0.1525E-01               4200.00    0.8848E-02
  1900.00    0.1510E-01               4225.00    0.8811E-02
  1925.00    0.1496E-01               4250.00    0.8774E-02
  1950.00    0.1482E-01               4275.00    0.8738E-02
  1975.00    0.1469E-01               4300.00    0.8701E-02
  2000.00    0.1456E-01               4325.00    0.8666E-02
  2025.00    0.1443E-01               4350.00    0.8630E-02
  2050.00    0.1431E-01               4375.00    0.8595E-02
  2075.00    0.1419E-01               4400.00    0.8560E-02
  2100.00    0.1408E-01               4425.00    0.8526E-02
  2125.00    0.1396E-01               4450.00    0.8491E-02
  2150.00    0.1385E-01               4475.00    0.8457E-02
  2175.00    0.1374E-01               4500.00    0.8424E-02
  2200.00    0.1364E-01               4525.00    0.8390E-02
  2225.00    0.1353E-01               4550.00    0.8357E-02
  2250.00    0.1343E-01               4575.00    0.8324E-02
  2275.00    0.1333E-01               4600.00    0.8292E-02
  2300.00    0.1324E-01               4625.00    0.8259E-02
  2325.00    0.1314E-01               4650.00    0.8227E-02
  2350.00    0.1305E-01               4675.00    0.8196E-02
  2375.00    0.1296E-01               4700.00    0.8164E-02
  2400.00    0.1287E-01               4725.00    0.8133E-02
  2425.00    0.1279E-01               4750.00    0.8102E-02
  2450.00    0.1270E-01               4775.00    0.8071E-02
  2475.00    0.1262E-01               4800.00    0.8041E-02
  2500.00    0.1254E-01               4825.00    0.8010E-02
  2525.00    0.1246E-01               4850.00    0.7980E-02
  2550.00    0.1238E-01               4875.00    0.7951E-02
  2575.00    0.1230E-01               4900.00    0.7921E-02
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         2600.00    0.1222E-01             4925.00    0.7892E-02
         2625.00    0.1215E-01             4950.00    0.7863E-02
         2650.00    0.1207E-01             4975.00    0.7834E-02
         2675.00    0.1200E-01             5000.00    0.7805E-02


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 **********************  AERSCREEN MAXIMUM IMPACT SUMMARY  *********************
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                         MAXIMUM      SCALED      SCALED      SCALED      SCALED
                          1-HOUR      3-HOUR      8-HOUR     24-HOUR      ANNUAL
   CALCULATION             CONC        CONC        CONC        CONC        CONC
    PROCEDURE            (ug/m3)     (ug/m3)     (ug/m3)     (ug/m3)     (ug/m3)
 ---------------       ----------  ----------  ----------  ----------  ----------
 FLAT TERRAIN          0.1230      0.1230      0.1107      0.7381E-01  0.1230E-01

 DISTANCE FROM SOURCE        388.00 meters



 IMPACT AT THE
 AMBIENT BOUNDARY      0.1230      0.1230      0.1107      0.7381E-01  0.1230E-01

 DISTANCE FROM SOURCE        388.00 meters
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Westport Construction Risk Calculations

	μg/m3
Annual Avg Concentration:	0.012

Cancer Risk

DOSEair = (Cair*(BR/BW)*A*EF*10^{-6}) 8.35564E-06

Risk = DOSEair * CPF * ASF * ED/AT * FAH 2.23215E-06

		in one million
Cancer Risk:	Construction Exposure	2.23

Threshold: 10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	(mg/kg/day)$^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW	999	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.0123	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.68	days/year	Exposure frequency (days/year)
ED	ED	2	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 5 years [construction])	2.75		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 years)	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	0.85		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	0.72		
	FAH (16 - 70 years)	0.73		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = 0.002

C_i	1.23E-02	Concentration (annual average)
REL_i	5	Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = 0.05

Max Hourly	1.23E-01
Acute REL (Acrolein)	2.5

Westport ADT Calculations

Roadway	Total	Auto	Truck
SR-85	117,000	116,333	667
Stevens Creek Blvd	37,628	36,875	753

		SR-85			Stevens Creek Blvd		
	Period Length	ADT - All Vehicles	TOG Vehicles	Diesel Vehicles	ADT - All Vehicles	TOG Vehicles	Diesel Vehicles
2020	5	117,000	116,333	667	37,628	36,875	753
2025	5	125,190	124,476	714	40,262	39,457	805
2030	5	133,953	133,190	764	43,080	42,219	862
2035	5	143,330	142,513	817	46,096	45,174	922
2040	5	153,363	152,489	874	49,323	48,336	986
2045	5	164,099	163,163	935	76,943	51,720	1,056
2050-2089	40	255,994	254,535	1,459	120,032	80,683	1,647

Weighted Avg	70	206,063	204,889	1,175	89,542	64,946	1,325
Emission Factor (g/s)		0.0011	0.0190	0.0056	0.00128847	0.0234	0.0065
Length (mi)		1	1	1	0.3	0.3	0.3
g/day		224.96	3,899.66	6.59	34.61	455.80	2.58
g/sec		2.60E-03	4.51E-02	7.63E-05	4.01E-04	5.28E-03	2.98E-05

Toxic Air Contaminant Concentrations

	Mass Fraction	Emissions Rates	AERMOD Annual	Annual MER Concentration	Emissions Rates (1-hour)	Aermod Hourly	Acute Concentration
SR-85							
DPM	1	7.63E-05	0.002	2.00E-03			
Acetaldehyde	2.80E-03	4.51E-02	1.3169	3.69E-03	3.51E-03	5.7779	1.62E-02
Acrolein	1.30E-03			1.71E-03			7.51E-03
Benzene	2.83E-02			3.73E-02			1.64E-01
1,3-Butadiene	5.50E-03			7.24E-03			3.18E-02
Ethylbenzene	1.17E-02			1.54E-02			6.76E-02
Formaldehyde	1.58E-02			2.08E-02			9.13E-02
Hexane	3.14E-02			4.14E-02			1.81E-01
Methanol	1.20E-03			1.58E-03			6.93E-03
Methly Ethyl Ketone	2.00E-04			2.63E-04			1.16E-03
Naphthalene	5.00E-04			6.58E-04			2.89E-03
Propylene	3.06E-02			4.03E-02			1.77E-01
Styrene	1.20E-03			1.58E-03			6.93E-03
Toluene	7.46E-02			9.82E-02			4.31E-01
Xylenes	5.38E-02			7.08E-02			3.11E-01
$PM_{2.5}$	1.00E+00	2.49E-02		1.32E+00			--
Stevens Creek Blvd							
DPM	1	2.98E-05	0.0022	2.20E-03			
Acetaldehyde	2.80E-03	5.28E-03	0.5104	1.43E-03	5.28E-04	1.9166	5.37E-03
Acrolein	1.30E-03			6.64E-04			2.49E-03
Benzene	2.83E-02			1.44E-02			5.42E-02
1,3-Butadiene	5.50E-03			2.81E-03			1.05E-02
Ethylbenzene	1.17E-02			5.97E-03			2.24E-02
Formaldehyde	1.58E-02			8.06E-03			3.03E-02
Hexane	3.14E-02			1.60E-02			6.02E-02
Methanol	1.20E-03			6.12E-04			2.30E-03
Methly Ethyl Ketone	2.00E-04			1.02E-04			3.83E-04
Naphthalene	5.00E-04			2.55E-04			9.58E-04
Propylene	3.06E-02			1.56E-02			5.86E-02
Styrene	1.20E-03			6.12E-04			2.30E-03
Toluene	7.46E-02			3.81E-02			1.43E-01
Xylenes	5.38E-02			2.75E-02			1.03E-01
$PM_{2.5}$	1.00E+00	2.49E-02		5.10E-01			--

Emissions Factor Weighting

Risk Year	Modeling Year	Period	WF	Weighting Factor		35 mph - Emissions Factors (g/mi)			55 mph - Emissions Factors (g/mi)		
				Period	Factor	TACs			TACs		
						TOG	Diesel	$PM_{2.5}$	TOG	Diesel	$PM_{2.5}$
1	2020	1	0.0143	2020-2024	0.0714	0.0399	0.0242	0.00320325	0.0321	0.0265	0.00324186
2	2021	1	0.0143								
3	2022	1	0.0143								
4	2023	1	0.0143								
5	2024	1	0.0143								
6	2025	1	0.0143	2025-2029	0.0714	0.0299	0.0074	0.00198643	0.0241	0.0059	0.00159213
7	2026	1	0.0143								
8	2027	1	0.0143								
9	2028	1	0.0143								
10	2029	1	0.0143								
11	2030	1	0.0143	2030-2034	0.0714	0.0254	0.0060	0.00159258	0.0205	0.0047	0.00127736
12	2031	1	0.0143								
13	2032	1	0.0143								
14	2033	1	0.0143								
15	2034	1	0.0143								
16	2035	1	0.0143	2035-2039	0.0714	0.0228	0.0053	0.00126164	0.0186	0.0041	0.00101867
17	2036	1	0.0143								
18	2037	1	0.0143								
19	2038	1	0.0143								
20	2039	1	0.0143								
21-25	2040-2044	5	0.0714	2040-2044	0.0714	0.0216	0.0049	0.00107713	0.0176	0.0039	0.00087493
26-30	2045-2049	5	0.0714	2045-2049	0.0714	0.0211	0.0048	0.00100531	0.0172	0.0038	0.00081943
31-70	2050-2089	40	0.5714	2050-2089	0.5714	0.0209	0.0048	0.00098904	0.0170	0.0037	0.00080741
70-yr avg.		**70**	**1**		**1**	**0.0234**	**0.0065**	**0.0013**	**0.0190**	**0.0056**	**0.0011**

Emission Factor Calculations

	35 mph			55 mph		
	PM2.5			PM2.5		
	VMT	WT	Rate	VMT	WT	Rate
2020	2995903	9596.616	0.003203	3932387.46	12748.24	0.0032
2025	3023035	6005.06	0.001986	3975597.79	6329.66	0.0016
2030	3052205	4860.867	0.001593	4018538.36	5133.13	0.0013
2035	3110968	3924.922	0.001262	4099096.62	4175.61	0.0010
2040	3176082	3421.058	0.001077	4187545.29	3663.79	0.0009
2045	3235126	3252.31	0.001005	4265173.76	3495.00	0.0008
2050	3271836	3235.961	0.000989	4321657.23	3489.35	0.0008

EMFAC2014 (v1.0.7) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2020, 2025, 2030, 2035, 2040, 2045, 2050
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdlYr	Speed	Fuel	VMT	PM2_5_RUNEX	PM2.5 Weighted
Santa Clara	2020	HHDT	Aggregate	55	GAS	1751.77565	0.000579617	1.01535808
Santa Clara	2020	HHDT	Aggregate	55	DSL	170658.766	0.017370559	2964.438165
Santa Clara	2020	LDA	Aggregate	55	GAS	2262644.8	0.001180895	2671.945004
Santa Clara	2020	LDA	Aggregate	55	DSL	24305.5539	0.008615306	209.3997914
Santa Clara	2020	LDT1	Aggregate	55	GAS	148348.459	0.001716567	254.6500119
Santa Clara	2020	LDT1	Aggregate	55	DSL	112.490439	0.101862309	11.4585359
Santa Clara	2020	LDT2	Aggregate	55	GAS	718581.571	0.001144331	822.2950209
Santa Clara	2020	LDT2	Aggregate	55	DSL	1401.25685	0.004748152	6.653380326
Santa Clara	2020	LHDT1	Aggregate	55	GAS	13109.0209	0.000999699	13.10506901
Santa Clara	2020	LHDT1	Aggregate	55	DSL	30209.6509	0.018108905	547.0636956
Santa Clara	2020	LHDT2	Aggregate	55	GAS	2611.77243	0.00074693	1.950811217
Santa Clara	2020	LHDT2	Aggregate	55	DSL	13801.3166	0.013316001	183.7783499
Santa Clara	2020	MCY	Aggregate	55	GAS	20854.9531	0.001440875	30.04937554
Santa Clara	2020	MDV	Aggregate	55	GAS	413839.428	0.001300813	538.3277623
Santa Clara	2020	MDV	Aggregate	55	DSL	8130.64579	0.004570654	37.16237073
Santa Clara	2020	MH	Aggregate	55	GAS	3565.15909	0.001438343	5.127921951
Santa Clara	2020	MH	Aggregate	55	DSL	1115.71057	0.110503859	123.2903235
Santa Clara	2020	MHDT	Aggregate	55	GAS	9073.0586	0.000778956	7.067510695
Santa Clara	2020	MHDT	Aggregate	55	DSL	71600.0402	0.055561634	3978.215196
Santa Clara	2020	OBUS	Aggregate	55	GAS	5416.05274	0.00055511	3.00650762
Santa Clara	2020	OBUS	Aggregate	55	DSL	8511.91985	0.017052741	145.1515628
Santa Clara	2020	SBUS	Aggregate	55	GAS	453.161217	0.000715179	0.324091257
Santa Clara	2020	SBUS	Aggregate	55	DSL	839.238512	0.029101864	24.42340526
Santa Clara	2020	UBUS	Aggregate	55	GAS	425.051429	0.000911824	0.387572003
Santa Clara	2020	UBUS	Aggregate	55	DSL	1026.60845	0.163603431	167.9566651
Santa Clara	2025	HHDT	Aggregate	55	GAS	2038.18552	0.000672056	1.369774242
Santa Clara	2025	HHDT	Aggregate	55	DSL	194265.886	0.00491664	955.1355111
Santa Clara	2025	LDA	Aggregate	55	GAS	2266283.91	0.001173744	2660.036267
Santa Clara	2025	LDA	Aggregate	55	DSL	28226.2721	0.003783108	106.7830296
Santa Clara	2025	LDT1	Aggregate	55	GAS	142781.952	0.001391867	198.7335411
Santa Clara	2025	LDT1	Aggregate	55	DSL	98.1115908	0.065323402	6.408982893
Santa Clara	2025	LDT2	Aggregate	55	GAS	732543.291	0.001162447	851.5429357
Santa Clara	2025	LDT2	Aggregate	55	DSL	1589.4967	0.003610962	5.73961169
Santa Clara	2025	LHDT1	Aggregate	55	GAS	9885.38769	0.000875799	8.657614348
Santa Clara	2025	LHDT1	Aggregate	55	DSL	30864.4601	0.012778386	394.3979719
Santa Clara	2025	LHDT2	Aggregate	55	GAS	2534.25725	0.000709038	1.796884609
Santa Clara	2025	LHDT2	Aggregate	55	DSL	14979.9055	0.00934998	140.0618222
Santa Clara	2025	MCY	Aggregate	55	GAS	21118.5257	0.001543864	32.60414045
Santa Clara	2025	MDV	Aggregate	55	GAS	408366.702	0.001199822	489.9672325
Santa Clara	2025	MDV	Aggregate	55	DSL	9939.31305	0.002847855	28.30571814
Santa Clara	2025	MH	Aggregate	55	GAS	3228.8264	0.000985339	3.181488966
Santa Clara	2025	MH	Aggregate	55	DSL	1062.40812	0.074002625	78.62098945
Santa Clara	2025	MHDT	Aggregate	55	GAS	10162.7203	0.000730022	7.419006319

Santa Clara	2025	MHDT	Aggregated	55	DSL	77569.8812	0.002609344	202.4065012
Santa Clara	2025	OBUS	Aggregated	55	GAS	5828.54684	0.000672909	3.922081506
Santa Clara	2025	OBUS	Aggregated	55	DSL	9403.16369	0.003351071	31.51066747
Santa Clara	2025	SBUS	Aggregated	55	GAS	530.327717	0.000612198	0.324665767
Santa Clara	2025	SBUS	Aggregated	55	DSL	846.878469	0.020602223	17.44757914
Santa Clara	2025	UBUS	Aggregated	55	GAS	541.892208	0.000723072	0.391827086
Santa Clara	2025	UBUS	Aggregated	55	DSL	907.489148	0.113378833	102.8900607
Santa Clara	2030	HHDT	Aggregated	55	GAS	2249.10779	0.000737948	1.659723822
Santa Clara	2030	HHDT	Aggregated	55	DSL	210796.779	0.004585806	966.6730416
Santa Clara	2030	LDA	Aggregated	55	GAS	2258596.12	0.000911902	2059.618386
Santa Clara	2030	LDA	Aggregated	55	DSL	30025.9881	0.001417702	42.56791044
Santa Clara	2030	LDT1	Aggregated	55	GAS	142503.862	0.001016111	144.7997495
Santa Clara	2030	LDT1	Aggregated	55	DSL	76.8349037	0.008493131	0.652568904
Santa Clara	2030	LDT2	Aggregated	55	GAS	752887.46	0.000912935	687.3374503
Santa Clara	2030	LDT2	Aggregated	55	DSL	1652.20732	0.003129056	5.169849261
Santa Clara	2030	LHDT1	Aggregated	55	GAS	8152.24646	0.000801974	6.537892084
Santa Clara	2030	LHDT1	Aggregated	55	DSL	31683.6204	0.00899026	284.843994
Santa Clara	2030	LHDT2	Aggregated	55	GAS	2563.00094	0.000735906	1.886128524
Santa Clara	2030	LHDT2	Aggregated	55	DSL	15857.7603	0.007187068	113.9708041
Santa Clara	2030	MCY	Aggregated	55	GAS	21456.0484	0.001604479	34.42577195
Santa Clara	2030	MDV	Aggregated	55	GAS	413114.132	0.000962081	397.4494328
Santa Clara	2030	MDV	Aggregated	55	DSL	10986.4477	0.001583137	17.39305701
Santa Clara	2030	MH	Aggregated	55	GAS	3146.6951	0.000797089	2.508196394
Santa Clara	2030	MH	Aggregated	55	DSL	1039.05626	0.04317631	44.86261535
Santa Clara	2030	MHDT	Aggregated	55	GAS	10988.083	0.000746184	8.199131338
Santa Clara	2030	MHDT	Aggregated	55	DSL	81792.8507	0.002520463	206.1558877
Santa Clara	2030	OBUS	Aggregated	55	GAS	6115.13329	0.000734077	4.48897765
Santa Clara	2030	OBUS	Aggregated	55	DSL	9940.31389	0.003249696	32.3029988
Santa Clara	2030	SBUS	Aggregated	55	GAS	598.161289	0.000635697	0.380249246
Santa Clara	2030	SBUS	Aggregated	55	DSL	853.882764	0.011763368	10.04453748
Santa Clara	2030	UBUS	Aggregated	55	GAS	629.030734	0.000727888	0.457863955
Santa Clara	2030	UBUS	Aggregated	55	DSL	833.539696	0.07047825	58.74641927
Santa Clara	2035	HHDT	Aggregated	55	GAS	2372.86341	0.000764068	1.813029783
Santa Clara	2035	HHDT	Aggregated	55	DSL	226262.501	0.004415703	999.1079752
Santa Clara	2035	LDA	Aggregated	55	GAS	2278112.18	0.000665233	1515.475539
Santa Clara	2035	LDA	Aggregated	55	DSL	31191.6837	0.000823121	25.67453121
Santa Clara	2035	LDT1	Aggregated	55	GAS	144844.197	0.000709186	102.7214431
Santa Clara	2035	LDT1	Aggregated	55	DSL	79.2924115	0.004138793	0.328174901
Santa Clara	2035	LDT2	Aggregated	55	GAS	774583.195	0.000673168	521.4246254
Santa Clara	2035	LDT2	Aggregated	55	DSL	1699.08209	0.003115594	5.293650259
Santa Clara	2035	LHDT1	Aggregated	55	GAS	7399.40052	0.000752552	5.568435583
Santa Clara	2035	LHDT1	Aggregated	55	DSL	32764.9482	0.006630273	217.2405504
Santa Clara	2035	LHDT2	Aggregated	55	GAS	2642.92099	0.000756404	1.999116953
Santa Clara	2035	LHDT2	Aggregated	55	DSL	16587.8178	0.006034379	100.0971726
Santa Clara	2035	MCY	Aggregated	55	GAS	21988.9474	0.001641329	36.09108934
Santa Clara	2035	MDV	Aggregated	55	GAS	424919.394	0.000735385	312.4793801
Santa Clara	2035	MDV	Aggregated	55	DSL	11706.3676	0.001100349	12.88108951
Santa Clara	2035	MH	Aggregated	55	GAS	3204.51255	0.000760336	2.436506767
Santa Clara	2035	MH	Aggregated	55	DSL	1054.37425	0.025891918	27.29977141
Santa Clara	2035	MHDT	Aggregated	55	GAS	11565.1257	0.000762341	8.81656781
Santa Clara	2035	MHDT	Aggregated	55	DSL	86261.3086	0.002421035	208.8416882
Santa Clara	2035	OBUS	Aggregated	55	GAS	6347.00329	0.000760092	4.824309262
Santa Clara	2035	OBUS	Aggregated	55	DSL	10514.3277	0.003002292	31.56708113
Santa Clara	2035	SBUS	Aggregated	55	GAS	651.556801	0.000694269	0.45235543
Santa Clara	2035	SBUS	Aggregated	55	DSL	858.607395	0.004701291	4.036562797
Santa Clara	2035	UBUS	Aggregated	55	GAS	690.366114	0.000748351	0.516635874
Santa Clara	2035	UBUS	Aggregated	55	DSL	794.646536	0.03602023	28.62335073
Santa Clara	2040	HHDT	Aggregated	55	GAS	2451.26007	0.000772331	1.893183126
Santa Clara	2040	HHDT	Aggregated	55	DSL	242160.415	0.004352191	1053.928279
Santa Clara	2040	LDA	Aggregated	55	GAS	2308733.24	0.000521082	1203.038281
Santa Clara	2040	LDA	Aggregated	55	DSL	32022.5621	0.000601092	19.2484932
Santa Clara	2040	LDT1	Aggregated	55	GAS	147839.842	0.000552231	81.64167207
Santa Clara	2040	LDT1	Aggregated	55	DSL	81.4239375	0.003276767	0.26680726
Santa Clara	2040	LDT2	Aggregated	55	GAS	792852.063	0.00052615	417.1588391
Santa Clara	2040	LDT2	Aggregated	55	DSL	1741.48062	0.003120643	5.43453944
Santa Clara	2040	LHDT1	Aggregated	55	GAS	7127.48475	0.000749082	5.33906947
Santa Clara	2040	LHDT1	Aggregated	55	DSL	33737.4775	0.005327432	179.7341268
Santa Clara	2040	LHDT2	Aggregated	55	GAS	2714.11188	0.000768387	2.085487246
Santa Clara	2040	LHDT2	Aggregated	55	DSL	17104.5668	0.005445553	93.14382048
Santa Clara	2040	MCY	Aggregated	55	GAS	22522.2235	0.001662504	37.44329759
Santa Clara	2040	MDV	Aggregated	55	GAS	436385.307	0.000588391	256.7652877

Santa Clara	2040	MDV	Aggregated	55	DSL	12211.3884	0.00082442	10.06731665
Santa Clara	2040	MH	Aggregated	55	GAS	3296.29883	0.000761147	2.508968024
Santa Clara	2040	MH	Aggregated	55	DSL	1079.19767	0.018170886	19.60997808
Santa Clara	2040	MHDT	Aggregated	55	GAS	11957.5698	0.000769963	9.206881652
Santa Clara	2040	MHDT	Aggregated	55	DSL	90814.6889	0.002339639	212.4735502
Santa Clara	2040	OBUS	Aggregated	55	GAS	6537.77459	0.000769314	5.029601205
Santa Clara	2040	OBUS	Aggregated	55	DSL	11121.3747	0.003009483	33.46958345
Santa Clara	2040	SBUS	Aggregated	55	GAS	694.499012	0.000748146	0.519586808
Santa Clara	2040	SBUS	Aggregated	55	DSL	860.601885	0.002256771	1.942181104
Santa Clara	2040	UBUS	Aggregated	55	GAS	734.261125	0.000761448	0.559101624
Santa Clara	2040	UBUS	Aggregated	55	DSL	764.172077	0.014770207	11.2869801

Santa Clara	2045	HHDT	Aggregated	55	GAS	2503.81226	0.000774209	1.938473836
Santa Clara	2045	HHDT	Aggregated	55	DSL	257823.072	0.00434137	1119.305246
Santa Clara	2045	LDA	Aggregated	55	GAS	2339446.75	0.000460185	1076.577862
Santa Clara	2045	LDA	Aggregated	55	DSL	32596.9354	0.000537361	17.51632987
Santa Clara	2045	LDT1	Aggregated	55	GAS	150188.342	0.00047999	72.08889216
Santa Clara	2045	LDT1	Aggregated	55	DSL	83.099377	0.003187298	0.264862451
Santa Clara	2045	LDT2	Aggregated	55	GAS	806087.739	0.000464237	374.2156075
Santa Clara	2045	LDT2	Aggregated	55	DSL	1773.97408	0.003126695	5.546675632
Santa Clara	2045	LHDT1	Aggregated	55	GAS	6983.17854	0.000756171	5.280474435
Santa Clara	2045	LHDT1	Aggregated	55	DSL	34523.426	0.004640873	160.2188458
Santa Clara	2045	LHDT2	Aggregated	55	GAS	2767.65818	0.000772665	2.138471876
Santa Clara	2045	LHDT2	Aggregated	55	DSL	17464.3861	0.005226894	91.28450119
Santa Clara	2045	MCY	Aggregated	55	GAS	22911.5778	0.001669067	38.24096661
Santa Clara	2045	MDV	Aggregated	55	GAS	443718.331	0.000507663	225.2591719
Santa Clara	2045	MDV	Aggregated	55	DSL	12573.6328	0.000695447	8.744298325
Santa Clara	2045	MH	Aggregated	55	GAS	3367.68448	0.000766917	2.582732981
Santa Clara	2045	MH	Aggregated	55	DSL	1100.09653	0.014716572	16.18964953
Santa Clara	2045	MHDT	Aggregated	55	GAS	12220.5579	0.000773024	9.44678839
Santa Clara	2045	MHDT	Aggregated	55	DSL	95512.0457	0.002306197	220.2695492
Santa Clara	2045	OBUS	Aggregated	55	GAS	6671.21566	0.000771774	5.148672918
Santa Clara	2045	OBUS	Aggregated	55	DSL	11743.4664	0.003053392	35.85740674
Santa Clara	2045	SBUS	Aggregated	55	GAS	722.126582	0.000771173	0.556884442
Santa Clara	2045	SBUS	Aggregated	55	DSL	860.846547	0.002164324	1.863150437
Santa Clara	2045	UBUS	Aggregated	55	GAS	762.762922	0.000766757	0.584853541
Santa Clara	2045	UBUS	Aggregated	55	DSL	767.038418	0.005053261	3.876045002

Santa Clara	2050	HHDT	Aggregated	55	GAS	2538.86653	0.000774601	1.966609265
Santa Clara	2050	HHDT	Aggregated	55	DSL	272446.067	0.004335288	1181.132066
Santa Clara	2050	LDA	Aggregated	55	GAS	2360999.16	0.000442752	1045.336141
Santa Clara	2050	LDA	Aggregated	55	DSL	32947.2513	0.000520841	17.16026784
Santa Clara	2050	LDT1	Aggregated	55	GAS	151904.47	0.00045167	68.610729
Santa Clara	2050	LDT1	Aggregated	55	DSL	84.2697548	0.003187938	0.268646712
Santa Clara	2050	LDT2	Aggregated	55	GAS	814518.112	0.000445476	362.8480162
Santa Clara	2050	LDT2	Aggregated	55	DSL	1794.7867	0.003136437	5.629235375
Santa Clara	2050	LHDT1	Aggregated	55	GAS	6935.00454	0.000765435	5.308291873
Santa Clara	2050	LHDT1	Aggregated	55	DSL	35023.3409	0.004237174	148.4000061
Santa Clara	2050	LHDT2	Aggregated	55	GAS	2803.47436	0.000774067	2.170077887
Santa Clara	2050	LHDT2	Aggregated	55	DSL	17696.6623	0.005170961	91.50874416
Santa Clara	2050	MCY	Aggregated	55	GAS	23133.9112	0.001673066	38.70456985
Santa Clara	2050	MDV	Aggregated	55	GAS	447347.579	0.000466864	208.8506732
Santa Clara	2050	MDV	Aggregated	55	DSL	12835.7925	0.000645836	8.289821423
Santa Clara	2050	MH	Aggregated	55	GAS	3421.35071	0.000770971	2.637763855
Santa Clara	2050	MH	Aggregated	55	DSL	1115.54813	0.012213497	13.62474353
Santa Clara	2050	MHDT	Aggregated	55	GAS	12394.2732	0.000774181	9.595414436
Santa Clara	2050	MHDT	Aggregated	55	DSL	99430.6895	0.002297785	228.4703663
Santa Clara	2050	OBUS	Aggregated	55	GAS	6752.61901	0.00077285	5.218761617
Santa Clara	2050	OBUS	Aggregated	55	DSL	12371.1404	0.003036369	37.56334314
Santa Clara	2050	SBUS	Aggregated	55	GAS	737.796493	0.00077474	0.571600587
Santa Clara	2050	SBUS	Aggregated	55	DSL	860.846547	0.002175981	1.873186046
Santa Clara	2050	UBUS	Aggregated	55	GAS	784.898735	0.000769382	0.60388674
Santa Clara	2050	UBUS	Aggregated	55	DSL	779.322431	0.003855004	3.00429073

Emission Factor Calculations

	35 mph						55 mph					
	GAS		Diesel		GAS	Diesel	GAS		Diesel		GAS	Diesel
	VMT	TOG WT	VMT	PM10 WT	TOG Rate	PM Rate	VMT	TOG WT	VMT	PM10 WT	TOG Rate	PM Rate
2020	2766278	110325.2	229624.6	5563.29	0.0399	0.0242	3600674.26	115537.55	331713.20	8778.76	0.0321	0.0265
2025	2768150	82827.3	254884.7	1895.89	0.0299	0.0074	3605844.52	86896.63	369753.27	2163.29	0.0241	0.0059
2030	2780299	70483.16	271905.5	1636.77	0.0254	0.0060	3622999.08	74390.01	395539.28	1864.02	0.0205	0.0047
2035	2823081	64402.37	287887.3	1517.49	0.0228	0.0053	3679321.66	68330.79	419774.96	1736.09	0.0186	0.0041
2040	2872431	62012.14	303650.7	1494.98	0.0216	0.0049	3743845.94	65969.92	443699.35	1714.79	0.0176	0.0039
2045	2914144	61422.41	318845.2	1530.58	0.0211	0.0048	3798351.74	65402.97	466822.02	1756.94	0.0172	0.0038
2050	2941658	61362.62	332314.8	1580.93	0.0209	0.0048	3834271.52	65341.98	487385.72	1815.46	0.0170	0.0037

EMFAC2014 (v1.0.7) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2020, 2025, 2030, 2035, 2040, 2045, 2050
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdlYr	Speed	Fuel	VMT	TOG_RUNEX	TOG WT	PM10_RUNEX	PM10 WT
Santa Clara	2020	HHDT	Aggregated	35	GAS	1474.50041	0.63673292	938.862958	0.000804	1.18549253
Santa Clara	2020	HHDT	Aggregated	35	DSL	117055.445	0.21995189	25746.5667	0.02041631	2389.84025
Santa Clara	2020	LDA	Aggregated	35	GAS	1729865.38	0.01683434	29121.1483	0.00164648	2848.19211
Santa Clara	2020	LDA	Aggregated	35	DSL	18582.3848	0.02124435	394.770649	0.01049027	194.934219
Santa Clara	2020	LDT1	Aggregated	35	GAS	113417.211	0.04094766	4644.16996	0.00240335	272.581721
Santa Clara	2020	LDT1	Aggregated	35	DSL	86.0025919	0.16822545	14.4678246	0.11643318	10.0135549
Santa Clara	2020	LDT2	Aggregated	35	GAS	549378.933	0.02318628	12738.056	0.0015967	877.193453
Santa Clara	2020	LDT2	Aggregated	35	DSL	1071.30634	0.01789247	19.1683177	0.00613569	6.57320411
Santa Clara	2020	LHDT1	Aggregated	35	GAS	19481.2741	0.07319811	1425.99249	0.00135288	26.3558743
Santa Clara	2020	LHDT1	Aggregated	35	DSL	23035.1942	0.10848091	2498.87882	0.02175233	501.069129
Santa Clara	2020	LHDT2	Aggregated	35	GAS	3881.34668	0.0317663	123.29602	0.00103091	4.00131759
Santa Clara	2020	LHDT2	Aggregated	35	DSL	10523.6571	0.07886791	829.978825	0.01656185	174.291271
Santa Clara	2020	MCY	Aggregated	35	GAS	15944.2885	2.68656436	42835.3574	0.00181939	29.0089124
Santa Clara	2020	MDV	Aggregated	35	GAS	316393.674	0.05241424	16583.533	0.00180102	569.829899
Santa Clara	2020	MDV	Aggregated	35	DSL	6216.14259	0.01447639	89.9873315	0.00593684	36.9042387
Santa Clara	2020	MH	Aggregated	35	GAS	2820.8256	0.17543281	494.865361	0.00188667	5.32195403
Santa Clara	2020	MH	Aggregated	35	DSL	681.852704	0.09194953	62.696035	0.09533465	65.0041895
Santa Clara	2020	MHDT	Aggregated	35	GAS	7178.78649	0.11597759	832.578363	0.0010747	7.71504334
Santa Clara	2020	MHDT	Aggregated	35	DSL	43757.4781	0.12223879	5348.86109	0.0426964	1868.28671
Santa Clara	2020	OBUS	Aggregated	35	GAS	4285.28989	0.04687136	200.857383	0.00077215	3.3088852
Santa Clara	2020	OBUS	Aggregated	35	DSL	4463.70557	0.12452116	555.825814	0.01884916	84.1370845
Santa Clara	2020	SBUS	Aggregated	35	GAS	1876.96269	0.13030912	244.585365	0.00099699	1.87130638
Santa Clara	2020	SBUS	Aggregated	35	DSL	3476.06837	0.08731105	303.499176	0.02862804	99.5130173
Santa Clara	2020	UBUS	Aggregated	35	GAS	279.639474	0.5073368	141.871396	0.00120523	0.33703113
Santa Clara	2020	UBUS	Aggregated	35	DSL	675.401208	0.42584607	287.61695	0.19651684	132.727708
Santa Clara	2025	HHDT	Aggregated	35	GAS	1715.57665	0.44302016	760.035049	0.00093668	1.60694608
Santa Clara	2025	HHDT	Aggregated	35	DSL	132379.897	0.15210881	20136.1483	0.00651006	861.800551
Santa Clara	2025	LDA	Aggregated	35	GAS	1732647.6	0.01086738	18829.3409	0.0016382	2838.42041
Santa Clara	2025	LDA	Aggregated	35	DSL	21579.9011	0.01135395	245.017131	0.00477942	103.139364
Santa Clara	2025	LDT1	Aggregated	35	GAS	109161.436	0.02247162	2453.03479	0.00195763	213.698131
Santa Clara	2025	LDT1	Aggregated	35	DSL	75.0094954	0.11072933	8.305751	0.07496222	5.62287818
Santa Clara	2025	LDT2	Aggregated	35	GAS	560053.121	0.01506133	8435.14573	0.00162282	908.864133
Santa Clara	2025	LDT2	Aggregated	35	DSL	1215.22181	0.01601131	19.4572885	0.00488857	5.94069704
Santa Clara	2025	LHDT1	Aggregated	35	GAS	14690.6431	0.04296686	631.210761	0.00119902	17.6143201
Santa Clara	2025	LHDT1	Aggregated	35	DSL	23534.4935	0.07976888	1877.32029	0.0159008	374.217389
Santa Clara	2025	LHDT2	Aggregated	35	GAS	3766.15162	0.01351567	50.9020534	0.0009846	3.70813895
Santa Clara	2025	LHDT2	Aggregated	35	DSL	11422.3442	0.05739973	655.639418	0.01223973	139.806424
Santa Clara	2025	MCY	Aggregated	35	GAS	16145.7983	2.60774831	42104.1783	0.00199178	32.1588385
Santa Clara	2025	MDV	Aggregated	35	GAS	312209.598	0.02803314	8752.21561	0.00167705	523.592466
Santa Clara	2025	MDV	Aggregated	35	DSL	7598.92741	0.01017578	77.3249892	0.00378017	28.7252144
Santa Clara	2025	MH	Aggregated	35	GAS	2554.7124	0.07333828	187.358213	0.001337	3.41565048
Santa Clara	2025	MH	Aggregated	35	DSL	649.27757	0.07282138	47.2812908	0.06426161	41.7236201
Santa Clara	2025	MHDT	Aggregated	35	GAS	8040.94878	0.04059587	326.429297	0.00101545	8.16515326
Santa Clara	2025	MHDT	Aggregated	35	DSL	47405.8725	0.04633795	2196.69078	0.003427	162.459829
Santa Clara	2025	OBUS	Aggregated	35	GAS	4611.66352	0.02391836	110.303418	0.00093727	4.32239151
Santa Clara	2025	OBUS	Aggregated	35	DSL	4919.01658	0.06563417	322.855559	0.00424817	20.8968064
Santa Clara	2025	SBUS	Aggregated	35	GAS	2196.58104	0.06901114	151.588558	0.00085343	1.87462361
Santa Clara	2025	SBUS	Aggregated	35	DSL	3507.71255	0.07695458	269.934545	0.01975472	69.2938758
Santa Clara	2025	UBUS	Aggregated	35	GAS	356.508512	0.09974228	35.5589703	0.00099983	0.35644695
Santa Clara	2025	UBUS	Aggregated	35	DSL	597.033138	0.33113174	197.696621	0.13777912	82.258701
Santa Clara	2030	HHDT	Aggregated	35	GAS	1893.11363	0.41362871	783.046146	0.00102873	1.94749754

Santa Clara	2030	HHDT	Aggregated	35	DSL	143080.217	0.15044331	21525.461	0.0060705	868.567823
Santa Clara	2030	LDA	Aggregated	35	GAS	1726770.04	0.00773982	13364.8973	0.00127215	2196.7178
Santa Clara	2030	LDA	Aggregated	35	DSL	22955.8424	0.00670603	153.942664	0.00192643	44.2228195
Santa Clara	2030	LDT1	Aggregated	35	GAS	108948.828	0.01321137	1439.3629	0.00142486	155.237182
Santa Clara	2030	LDT1	Aggregated	35	DSL	58.7427775	0.0257355	1.51177498	0.01042462	0.61237108
Santa Clara	2030	LDT2	Aggregated	35	GAS	575606.899	0.01064537	6127.54884	0.00127392	733.278451
Santa Clara	2030	LDT2	Aggregated	35	DSL	1263.16612	0.01531409	19.3442393	0.00435652	5.50300645
Santa Clara	2030	LHDT1	Aggregated	35	GAS	12115.0274	0.02129401	257.977463	0.00111245	13.4773408
Santa Clara	2030	LHDT1	Aggregated	35	DSL	24159.1123	0.06211709	1500.69376	0.01159562	280.139875
Santa Clara	2030	LHDT2	Aggregated	35	GAS	3808.86752	0.00704101	26.8182666	0.00102489	3.90367921
Santa Clara	2030	LHDT2	Aggregated	35	DSL	12091.7182	0.04797774	580.133316	0.0097602	118.017627
Santa Clara	2030	MCY	Aggregated	35	GAS	16403.8453	2.57086169	42172.0175	0.00208788	34.2492607
Santa Clara	2030	MDV	Aggregated	35	GAS	315839.162	0.01870409	5907.48346	0.00134507	424.826638
Santa Clara	2030	MDV	Aggregated	35	DSL	8399.49586	0.00749418	62.9473298	0.00218967	18.3921224
Santa Clara	2030	MH	Aggregated	35	GAS	2489.72847	0.02603055	64.8089989	0.00111117	2.76651824
Santa Clara	2030	MH	Aggregated	35	DSL	635.006369	0.05767131	36.6216469	0.03959389	25.142372
Santa Clara	2030	MHDT	Aggregated	35	GAS	8693.99234	0.01993511	173.315712	0.00104005	9.04220817
Santa Clara	2030	MHDT	Aggregated	35	DSL	49986.688	0.04635772	2317.26878	0.00334631	167.270744
Santa Clara	2030	OBUS	Aggregated	35	GAS	4838.41648	0.01597532	77.2952674	0.00102307	4.95001514
Santa Clara	2030	OBUS	Aggregated	35	DSL	5190.44669	0.06408117	332.60991	0.00414666	21.5229991
Santa Clara	2030	SBUS	Aggregated	35	GAS	2477.54305	0.030471	75.4932228	0.00088619	2.19556321
Santa Clara	2030	SBUS	Aggregated	35	DSL	3536.72386	0.06342399	224.313132	0.0114982	40.6659725
Santa Clara	2030	UBUS	Aggregated	35	GAS	413.836566	0.03163795	13.0929407	0.0010147	0.41992152
Santa Clara	2030	UBUS	Aggregated	35	DSL	548.382118	0.25292399	138.698991	0.0851892	46.7162352
Santa Clara	2035	HHDT	Aggregated	35	GAS	1997.28092	0.41931275	837.485363	0.00106514	2.12738469
Santa Clara	2035	HHDT	Aggregated	35	DSL	153173.323	0.14988688	22958.672	0.00584481	895.269623
Santa Clara	2035	LDA	Aggregated	35	GAS	1741690.7	0.00586698	10218.4695	0.00092753	1615.47794
Santa Clara	2035	LDA	Aggregated	35	DSL	23847.0545	0.0052051	124.126399	0.00113919	27.1663378
Santa Clara	2035	LDT1	Aggregated	35	GAS	110738.089	0.00788168	872.801794	0.00098982	109.61095
Santa Clara	2035	LDT1	Aggregated	35	DSL	60.6216221	0.01725641	1.04611175	0.00550367	0.33364158
Santa Clara	2035	LDT2	Aggregated	35	GAS	592193.992	0.00799736	4735.98709	0.00093881	555.95975
Santa Clara	2035	LDT2	Aggregated	35	DSL	1299.0034	0.01528583	19.8563429	0.00434526	5.64451125
Santa Clara	2035	LHDT1	Aggregated	35	GAS	10996.2255	0.01009855	111.045987	0.00104909	11.5359929
Santa Clara	2035	LHDT1	Aggregated	35	DSL	24983.6367	0.05297934	1323.61669	0.00881241	220.165988
Santa Clara	2035	LHDT2	Aggregated	35	GAS	3927.63645	0.00483848	19.0037979	0.00105446	4.14152208
Santa Clara	2035	LHDT2	Aggregated	35	DSL	12648.3952	0.04483441	567.083399	0.00834486	105.549089
Santa Clara	2035	MCY	Aggregated	35	GAS	16811.2639	2.55460233	42946.094	0.00214231	36.0149934
Santa Clara	2035	MDV	Aggregated	35	GAS	324864.667	0.01346511	4374.33998	0.00102661	333.508203
Santa Clara	2035	MDV	Aggregated	35	DSL	8949.89797	0.0062787	56.1937133	0.00152891	13.6835896
Santa Clara	2035	MH	Aggregated	35	GAS	2535.4748	0.01702787	43.1737316	0.00105994	2.68744522
Santa Clara	2035	MH	Aggregated	35	DSL	644.367766	0.04974447	32.0537338	0.0263484	16.9780618
Santa Clara	2035	MHDT	Aggregated	35	GAS	9150.56012	0.01444617	132.190593	0.00106273	9.72459561
Santa Clara	2035	MHDT	Aggregated	35	DSL	52717.5308	0.04555378	2401.48255	0.00323411	170.49438
Santa Clara	2035	OBUS	Aggregated	35	GAS	5021.87669	0.01363536	68.4750972	0.0010596	5.32117006
Santa Clara	2035	OBUS	Aggregated	35	DSL	5484.40556	0.06031015	330.765327	0.0038524	21.128149
Santa Clara	2035	SBUS	Aggregated	35	GAS	2698.70359	0.01208668	32.6183664	0.00096784	2.61190508
Santa Clara	2035	SBUS	Aggregated	35	DSL	3556.29296	0.05071051	180.341415	0.00542052	19.2769508
Santa Clara	2035	UBUS	Aggregated	35	GAS	454.188844	0.02351461	10.6800728	0.00104323	0.4738231
Santa Clara	2035	UBUS	Aggregated	35	DSL	522.794478	0.19125887	99.9890787	0.0416937	21.7972365
Santa Clara	2040	HHDT	Aggregated	35	GAS	2063.26877	0.42582354	878.588403	0.00107666	2.22143554
Santa Clara	2040	HHDT	Aggregated	35	DSL	163645.444	0.14922062	24419.2742	0.00576622	943.614905
Santa Clara	2040	LDA	Aggregated	35	GAS	1765101.5	0.00501789	8857.09093	0.00072641	1282.1917
Santa Clara	2040	LDA	Aggregated	35	DSL	24482.288	0.00464155	113.63566	0.00083479	20.4376433
Santa Clara	2040	LDT1	Aggregated	35	GAS	113028.358	0.00592603	669.808985	0.00076994	87.0246001
Santa Clara	2040	LDT1	Aggregated	35	DSL	62.2512429	0.01558692	0.97030506	0.0045376	0.28247127
Santa Clara	2040	LDT2	Aggregated	35	GAS	606161.135	0.00660178	4001.74397	0.00073352	444.629561
Santa Clara	2040	LDT2	Aggregated	35	DSL	1331.41845	0.01529435	20.3631796	0.00435337	5.79616187
Santa Clara	2040	LHDT1	Aggregated	35	GAS	10592.1324	0.00534703	56.6364489	0.00104425	11.0608207
Santa Clara	2040	LHDT1	Aggregated	35	DSL	25725.2011	0.04840275	1245.1704	0.00722612	185.89333
Santa Clara	2040	LHDT2	Aggregated	35	GAS	4033.433	0.00422058	17.0234411	0.00107116	4.32045332
Santa Clara	2040	LHDT2	Aggregated	35	DSL	13042.422	0.04393225	572.98288	0.00757755	98.8296036
Santa Clara	2040	MCY	Aggregated	35	GAS	17218.9708	2.5473207	43862.2409	0.00217191	37.3981391
Santa Clara	2040	MDV	Aggregated	35	GAS	333630.73	0.01020004	3403.04678	0.00082059	273.774081
Santa Clara	2040	MDV	Aggregated	35	DSL	9336.00272	0.00560999	52.3748887	0.00114718	10.7100636
Santa Clara	2040	MH	Aggregated	35	GAS	2608.09795	0.01299605	33.894979	0.00106107	2.76736934
Santa Clara	2040	MH	Aggregated	35	DSL	659.538298	0.04632755	30.5547907	0.02057921	13.5727795
Santa Clara	2040	MHDT	Aggregated	35	GAS	9461.06979	0.01274869	120.616208	0.00107336	10.1551083
Santa Clara	2040	MHDT	Aggregated	35	DSL	55500.2728	0.04459535	2475.05391	0.00313447	173.963982
Santa Clara	2040	OBUS	Aggregated	35	GAS	5172.81878	0.01312164	67.8758865	0.00107245	5.54760524
Santa Clara	2040	OBUS	Aggregated	35	DSL	5798.55223	0.06017827	348.946849	0.00382973	22.2068995
Santa Clara	2040	SBUS	Aggregated	35	GAS	2876.56729	0.01150738	33.1017661	0.00104294	3.00009978
Santa Clara	2040	SBUS	Aggregated	35	DSL	3564.554	0.04277141	152.460984	0.00302727	10.790885
Santa Clara	2040	UBUS	Aggregated	35	GAS	483.06718	0.02167474	10.4703567	0.00106149	0.51276979
Santa Clara	2040	UBUS	Aggregated	35	DSL	502.745464	0.1540482	77.4470361	0.0176586	8.87778129

Santa Clara	2045	HHDT	Aggregated	35	GAS	2107.50287	0.42680623	899.495362	0.00107928	2.27457905
Santa Clara	2045	HHDT	Aggregated	35	DSL	174014.303	0.14878498	25890.7147	0.00575381	1001.24449
Santa Clara	2045	LDA	Aggregated	35	GAS	1788582.97	0.00478592	8560.0202	0.00064152	1147.40318
Santa Clara	2045	LDA	Aggregated	35	DSL	24921.4151	0.00449478	112.016221	0.00074833	18.6493441
Santa Clara	2045	LDT1	Aggregated	35	GAS	114823.862	0.00534102	613.276375	0.00066912	76.8314369
Santa Clara	2045	LDT1	Aggregated	35	DSL	63.5321707	0.01541484	0.9793382	0.00444215	0.28221932
Santa Clara	2045	LDT2	Aggregated	35	GAS	616280.239	0.00612251	3773.18472	0.00064716	398.8343
Santa Clara	2045	LDT2	Aggregated	35	DSL	1356.26076	0.0153046	20.7570312	0.00436301	5.91737682
Santa Clara	2045	LHDT1	Aggregated	35	GAS	10377.6793	0.00454229	47.138394	0.00105413	10.9394308
Santa Clara	2045	LHDT1	Aggregated	35	DSL	26324.4956	0.04605012	1212.24629	0.00638227	168.009974
Santa Clara	2045	LHDT2	Aggregated	35	GAS	4113.00798	0.00408387	16.7969769	0.00107712	4.4302203
Santa Clara	2045	LHDT2	Aggregated	35	DSL	13316.7882	0.04371683	582.167778	0.00728706	97.0402262
Santa Clara	2045	MCY	Aggregated	35	GAS	17516.6448	2.54343919	44552.5209	0.00218194	38.2202329
Santa Clara	2045	MDV	Aggregated	35	GAS	339237.065	0.00797093	2704.03465	0.0007077	240.078399
Santa Clara	2045	MDV	Aggregated	35	DSL	9612.95038	0.00531935	51.1346171	0.00096908	9.31573969
Santa Clara	2045	MH	Aggregated	35	GAS	2664.57971	0.01191274	31.7424495	0.00106911	2.84873143
Santa Clara	2045	MH	Aggregated	35	DSL	672.310374	0.04453929	29.944229	0.01794212	12.0626733
Santa Clara	2045	MHDT	Aggregated	35	GAS	9669.15122	0.01203122	116.331706	0.00107763	10.4197233
Santa Clara	2045	MHDT	Aggregated	35	DSL	58371.0042	0.04421008	2580.58671	0.00309387	180.592425
Santa Clara	2045	OBUS	Aggregated	35	GAS	5278.40004	0.01250164	65.9886822	0.00107588	5.67894028
Santa Clara	2045	OBUS	Aggregated	35	DSL	6121.89325	0.06076886	372.020472	0.00387783	23.739667
Santa Clara	2045	SBUS	Aggregated	35	GAS	2990.99879	0.01148958	34.3653161	0.00107504	3.21545671
Santa Clara	2045	SBUS	Aggregated	35	DSL	3565.56737	0.04225647	150.668301	0.00290611	10.3619198
Santa Clara	2045	UBUS	Aggregated	35	GAS	501.818388	0.01497375	7.51410331	0.00106889	0.53638768
Santa Clara	2045	UBUS	Aggregated	35	DSL	504.631218	0.13882596	70.0559119	0.00666593	3.3638345
Santa Clara	2050	HHDT	Aggregated	35	GAS	2137.00866	0.42800346	914.64711	0.00107982	2.30759278
Santa Clara	2050	HHDT	Aggregated	35	DSL	183701.485	0.14821991	27228.2169	0.00574894	1056.08957
Santa Clara	2050	LDA	Aggregated	35	GAS	1805060.48	0.00473258	8542.58985	0.00061721	1114.10614
Santa Clara	2050	LDA	Aggregated	35	DSL	25189.2429	0.00446899	112.570598	0.00072665	18.3036949
Santa Clara	2050	LDT1	Aggregated	35	GAS	116135.897	0.00520736	604.761532	0.00062965	73.1244542
Santa Clara	2050	LDT1	Aggregated	35	DSL	64.4269626	0.01541431	0.99309686	0.00444687	0.28649857
Santa Clara	2050	LDT2	Aggregated	35	GAS	622725.532	0.00599606	3733.90235	0.00062101	386.718864
Santa Clara	2050	LDT2	Aggregated	35	DSL	1372.17269	0.01532181	21.0241735	0.0043769	6.00586029
Santa Clara	2050	LHDT1	Aggregated	35	GAS	10306.0881	0.004138	42.6466356	0.00106704	10.9970595
Santa Clara	2050	LHDT1	Aggregated	35	DSL	26705.6862	0.04469709	1193.66657	0.00589524	157.436526
Santa Clara	2050	LHDT2	Aggregated	35	GAS	4166.2343	0.00403534	16.8121593	0.00107908	4.4956977
Santa Clara	2050	LHDT2	Aggregated	35	DSL	13493.9014	0.04368448	589.474076	0.00721432	97.3493437
Santa Clara	2050	MCY	Aggregated	35	GAS	17686.6259	2.54006643	44925.2047	0.0021882	38.7019444
Santa Clara	2050	MDV	Aggregated	35	GAS	342011.743	0.00679967	2325.56718	0.00065083	222.590427
Santa Clara	2050	MDV	Aggregated	35	DSL	9813.37994	0.00522734	51.2978731	0.00090098	8.84163735
Santa Clara	2050	MH	Aggregated	35	GAS	2707.04151	0.01187399	32.1433973	0.00107476	2.90942999
Santa Clara	2050	MH	Aggregated	35	DSL	681.753431	0.04357677	29.7086147	0.01620018	11.0445275
Santa Clara	2050	MHDT	Aggregated	35	GAS	9806.59831	0.01195019	117.190745	0.00107924	10.5836565
Santa Clara	2050	MHDT	Aggregated	35	DSL	60765.8349	0.04413864	2682.12156	0.00308499	187.46183
Santa Clara	2050	OBUS	Aggregated	35	GAS	5342.808	0.01204642	64.3616921	0.00107738	5.75624749
Santa Clara	2050	OBUS	Aggregated	35	DSL	6448.64588	0.06056875	390.586402	0.00386704	24.9371625
Santa Clara	2050	SBUS	Aggregated	35	GAS	3055.90249	0.01147749	35.0740938	0.00108002	3.30042789
Santa Clara	2050	SBUS	Aggregated	35	DSL	3565.56737	0.04241891	151.247465	0.00292176	10.4177329
Santa Clara	2050	UBUS	Aggregated	35	GAS	516.381442	0.01493828	7.71385257	0.00107255	0.55384363
Santa Clara	2050	UBUS	Aggregated	35	DSL	512.712816	0.13244537	67.9064383	0.00537974	2.75826019

HARP 2 Risk Summary

			SR-85					Stevens Creek				
				Cancer	Chronic	Acute			Cancer	Chronic	Acute	
INDEX	**POLID**	**POLABBREV**	**CONC**	**INH_RISK**	**RESP**	**CONC**	**RESP**	**CONC**	**INH_RISK**	**RESP**	**CONC**	**RESP**
1	75070	Acetaldehyde	3.69E-03	3.31E-08	2.64E-05	1.62E-02	3.45E-05	1.43E-03	1.28E-08	1.02E-05	5.37E-03	1.14E-05
2	107028	Acrolein	1.71E-03	0.00E+00	4.89E-03	7.51E-03	3.00E-03	6.64E-04	0.00E+00	1.90E-03	2.49E-03	9.96E-04
3	71432	Benzene	3.73E-02	3.34E-06	0.00E+00	1.64E-01	0.00E+00	1.44E-02	1.29E-06	0.00E+00	5.42E-02	0.00E+00
4	106990	1,3-Butadiene	7.24E-03	3.89E-06	0.00E+00	3.18E-02	0.00E+00	2.81E-03	1.51E-06	0.00E+00	1.05E-02	0.00E+00
5	100414	Ethyl Benzene	1.54E-02	1.20E-07	0.00E+00	6.76E-02	0.00E+00	5.97E-03	4.65E-08	0.00E+00	2.24E-02	0.00E+00
6	50000	Formaldehyde	2.08E-02	3.91E-07	2.31E-03	9.13E-02	0.00E+00	8.06E-03	1.52E-07	8.96E-04	3.03E-02	0.00E+00
7	110543	Hexane	4.14E-02	0.00E+00	0.00E+00	1.81E-01	0.00E+00	1.60E-02	0.00E+00	0.00E+00	6.02E-02	0.00E+00
8	67561	Methanol	1.58E-03	0.00E+00	0.00E+00	6.93E-03	0.00E+00	6.12E-04	0.00E+00	0.00E+00	2.30E-03	0.00E+00
9	78933	MEK	2.63E-04	0.00E+00	0.00E+00	1.16E-03	8.92E-08	1.02E-04	0.00E+00	0.00E+00	3.83E-04	2.95E-08
10	91203	Naphthalene	6.58E-04	7.08E-08	7.31E-05	2.89E-03	0.00E+00	2.55E-04	2.74E-08	2.83E-05	9.58E-04	0.00E+00
11	115071	Propylene	4.03E-02	0.00E+00	1.34E-05	1.77E-01	0.00E+00	1.56E-02	0.00E+00	5.20E-06	5.86E-02	0.00E+00
12	100425	Styrene	1.58E-03	0.00E+00	0.00E+00	6.93E-03	3.30E-07	6.12E-04	0.00E+00	0.00E+00	2.30E-03	1.10E-07
13	108883	Toluene	9.82E-02	0.00E+00	3.27E-04	4.31E-01	1.16E-05	3.81E-02	0.00E+00	1.27E-04	1.43E-01	3.86E-06
14	1330207	Xylenes	7.08E-02	0.00E+00	1.01E-04	3.11E-01	1.41E-05	2.75E-02	0.00E+00	3.93E-05	1.03E-01	4.68E-06
15	88101	PM25	1.32E+00	0.00E+00	0.00E+00	0	0.00E+00	5.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	9901	DieselExhPM	2.00E-03	1.97E-06	4.00E-04	0	0.00E+00	2.20E-03	2.17E-06	4.40E-04	0.00E+00	0.00E+00
			Total	9.82E-06	8.14E-03		3.06E-03		5.21E-06	3.44E-03		1.02E-03

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**
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**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/20/2018
** File: C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL Westport_SR-85_PM.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ---------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00003816
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
** 584214.591, 4130961.572, 89.16, 4.15, 5.58
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** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
** ------------------------------------------------------------------------
   LOCATION L0001601     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001602     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001603     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001604     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001605     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001606     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001607     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001608     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001609     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001610     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001611     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001612     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001613     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001614     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001615     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001616     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001617     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001618     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001619     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001620     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001621     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001622     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001623     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001624     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001625     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001626     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001627     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001628     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001629     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001630     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001631     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001632     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001633     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001634     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001635     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001636     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001637     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001638     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001639     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001640     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001641     VOLUME   584169.465 4131159.828 86.73
   LOCATION L0001642     VOLUME   584167.177 4131171.608 86.78
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LOCATION L0001643     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001644     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001645     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001646     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001647     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001648     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001649     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001650     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001651     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001652     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001653     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001654     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001655     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001656     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001657     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001658     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001659     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001660     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001661     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001662     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001663     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001664     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001665     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001666     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001667     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001668     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001669     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001670     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001671     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001672     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001673     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001674     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001675     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001676     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001677     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001678     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001679     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001680     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001681     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001682     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001683     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001684     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001685     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001686     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001687     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001688     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001689     VOLUME   584011.260 4131709.957 92.56
LOCATION L0001690     VOLUME   584004.604 4131719.942 92.58
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   LOCATION L0001691     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00003816
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
** 583972.941, 4131730.297, 92.00, 4.15, 5.58
** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0001692     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001693     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001694     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001695     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001696     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001697     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001698     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001699     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001700     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001701     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001702     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001703     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001704     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001705     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001706     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001707     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001708     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001709     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001710     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001711     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001712     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001713     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001714     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001715     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001716     VOLUME   584086.826 4131462.295 89.31
   LOCATION L0001717     VOLUME   584089.956 4131450.711 89.21
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LOCATION L0001718     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001719     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001720     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001721     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001722     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001723     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001724     VOLUME   584111.078 4131369.437 88.73
LOCATION L0001725     VOLUME   584113.337 4131357.651 88.64
LOCATION L0001726     VOLUME   584115.596 4131345.866 88.59
LOCATION L0001727     VOLUME   584117.855 4131334.080 88.54
LOCATION L0001728     VOLUME   584120.114 4131322.295 88.45
LOCATION L0001729     VOLUME   584122.373 4131310.509 88.32
LOCATION L0001730     VOLUME   584124.631 4131298.724 88.17
LOCATION L0001731     VOLUME   584126.890 4131286.938 88.01
LOCATION L0001732     VOLUME   584129.149 4131275.153 87.79
LOCATION L0001733     VOLUME   584131.408 4131263.368 87.53
LOCATION L0001734     VOLUME   584133.667 4131251.582 87.37
LOCATION L0001735     VOLUME   584135.926 4131239.797 87.24
LOCATION L0001736     VOLUME   584138.185 4131228.011 87.18
LOCATION L0001737     VOLUME   584140.444 4131216.226 87.12
LOCATION L0001738     VOLUME   584142.793 4131204.458 87.35
LOCATION L0001739     VOLUME   584145.240 4131192.710 87.68
LOCATION L0001740     VOLUME   584147.688 4131180.963 87.82
LOCATION L0001741     VOLUME   584150.135 4131169.215 87.77
LOCATION L0001742     VOLUME   584152.583 4131157.467 87.57
LOCATION L0001743     VOLUME   584155.030 4131145.719 87.23
LOCATION L0001744     VOLUME   584157.477 4131133.972 86.91
LOCATION L0001745     VOLUME   584159.925 4131122.224 86.95
LOCATION L0001746     VOLUME   584162.372 4131110.476 87.05
LOCATION L0001747     VOLUME   584164.820 4131098.728 87.17
LOCATION L0001748     VOLUME   584167.267 4131086.981 87.32
LOCATION L0001749     VOLUME   584169.715 4131075.233 87.80
LOCATION L0001750     VOLUME   584172.162 4131063.485 88.16
LOCATION L0001751     VOLUME   584174.610 4131051.737 88.38
LOCATION L0001752     VOLUME   584177.057 4131039.989 88.47
LOCATION L0001753     VOLUME   584180.393 4131028.463 88.36
LOCATION L0001754     VOLUME   584183.730 4131016.936 88.28
LOCATION L0001755     VOLUME   584187.066 4131005.409 88.46
LOCATION L0001756     VOLUME   584190.403 4130993.882 88.67
LOCATION L0001757     VOLUME   584193.740 4130982.355 88.92
LOCATION L0001758     VOLUME   584197.076 4130970.829 89.17
LOCATION L0001759     VOLUME   584200.413 4130959.302 89.43
LOCATION L0001760     VOLUME   584203.750 4130947.775 89.63
LOCATION L0001761     VOLUME   584207.087 4130936.248 89.71
LOCATION L0001762     VOLUME   584210.423 4130924.722 89.81
LOCATION L0001763     VOLUME   584213.760 4130913.195 89.97
LOCATION L0001764     VOLUME   584217.097 4130901.668 90.14
LOCATION L0001765     VOLUME   584220.433 4130890.141 90.30
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   LOCATION L0001766     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0001767     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0001768     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0001769     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0001770     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0001771     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0001772     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0001773     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0001774     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0001775     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0001776     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0001777     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0001778     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0001779     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0001780     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0001781     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0001782     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0001783     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0001784     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0001785     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0001786     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0001787     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0001788     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0001789     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0001790     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0001791     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0001792     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0001793     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0001794     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0001795     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0001796     VOLUME   584367.886 4131105.823 91.93
   LOCATION L0001797     VOLUME   584379.884 4131106.028 91.90
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   LOCATION L0001798     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0001799     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0001800     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0001801     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0001802     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0001803     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0001804     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0001805     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0001806     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0001807     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0001808     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0001809     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0001810     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0001811     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0001812     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0001813     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0001814     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0001815     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0001816     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0001817     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0001818     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0001819     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0001820     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0001821     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0001822     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0001823     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0001824     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0001825     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0001826     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0001827     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0001828     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0001829     VOLUME   584749.747 4131127.452 86.14
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   LOCATION L0001830     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0001831     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0001832     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0001833     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0001834     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0001835     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0001836     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0001837     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0001838     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0001839     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0001840     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0001841     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0001842     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0001843     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0001844     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0001845     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0001846     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0001847     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0001848     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0001849     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0001850     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0001851     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0001852     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0001853     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0001854     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0001855     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0001856     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0001857     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0001858     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0001859     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0001860     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0001861     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0001862     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0001863     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0001864     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0001865     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0001866     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0001867     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0001868     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0001869     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0001870     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0001871     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0001872     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0001873     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0001874     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0001875     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
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** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001601     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001602     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001603     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001604     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001605     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001606     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001607     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001608     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001609     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001610     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001611     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001612     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001613     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001614     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001615     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001616     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001617     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001618     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001619     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001620     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001621     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001622     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001623     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001624     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001625     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001626     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001627     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001628     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001629     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001630     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001631     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001632     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001633     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001634     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001635     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001636     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001637     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001638     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001639     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001640     0.0000004193      4.15      5.58      2.93
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   SRCPARAM L0001643     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001644     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001645     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001646     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001647     0.0000004193      4.15      5.58      2.93
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   SRCPARAM L0001648     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001649     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001650     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001651     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001652     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001653     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001654     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001655     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001656     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001657     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001658     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001659     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001660     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001661     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001662     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001663     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001664     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001665     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001666     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001667     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001668     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001669     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001670     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001671     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001672     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001673     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001674     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001675     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001676     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001677     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001678     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001679     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001680     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001681     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001682     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001683     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001684     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001685     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001686     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001687     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001688     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001689     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001690     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001691     0.0000004193      4.15      5.58      2.93
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001692     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001693     0.000000424      4.15      5.58      3.21
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SRCPARAM L0001694     0.000000424      4.15       5.58       3.21
SRCPARAM L0001695     0.000000424      4.15       5.58       3.21
SRCPARAM L0001696     0.000000424      4.15       5.58       3.21
SRCPARAM L0001697     0.000000424      4.15       5.58       3.21
SRCPARAM L0001698     0.000000424      4.15       5.58       3.21
SRCPARAM L0001699     0.000000424      4.15       5.58       3.21
SRCPARAM L0001700     0.000000424      4.15       5.58       3.21
SRCPARAM L0001701     0.000000424      4.15       5.58       3.21
SRCPARAM L0001702     0.000000424      4.15       5.58       3.21
SRCPARAM L0001703     0.000000424      4.15       5.58       3.21
SRCPARAM L0001704     0.000000424      4.15       5.58       3.21
SRCPARAM L0001705     0.000000424      4.15       5.58       3.21
SRCPARAM L0001706     0.000000424      4.15       5.58       3.21
SRCPARAM L0001707     0.000000424      4.15       5.58       3.21
SRCPARAM L0001708     0.000000424      4.15       5.58       3.21
SRCPARAM L0001709     0.000000424      4.15       5.58       3.21
SRCPARAM L0001710     0.000000424      4.15       5.58       3.21
SRCPARAM L0001711     0.000000424      4.15       5.58       3.21
SRCPARAM L0001712     0.000000424      4.15       5.58       3.21
SRCPARAM L0001713     0.000000424      4.15       5.58       3.21
SRCPARAM L0001714     0.000000424      4.15       5.58       3.21
SRCPARAM L0001715     0.000000424      4.15       5.58       3.21
SRCPARAM L0001716     0.000000424      4.15       5.58       3.21
SRCPARAM L0001717     0.000000424      4.15       5.58       3.21
SRCPARAM L0001718     0.000000424      4.15       5.58       3.21
SRCPARAM L0001719     0.000000424      4.15       5.58       3.21
SRCPARAM L0001720     0.000000424      4.15       5.58       3.21
SRCPARAM L0001721     0.000000424      4.15       5.58       3.21
SRCPARAM L0001722     0.000000424      4.15       5.58       3.21
SRCPARAM L0001723     0.000000424      4.15       5.58       3.21
SRCPARAM L0001724     0.000000424      4.15       5.58       3.21
SRCPARAM L0001725     0.000000424      4.15       5.58       3.21
SRCPARAM L0001726     0.000000424      4.15       5.58       3.21
SRCPARAM L0001727     0.000000424      4.15       5.58       3.21
SRCPARAM L0001728     0.000000424      4.15       5.58       3.21
SRCPARAM L0001729     0.000000424      4.15       5.58       3.21
SRCPARAM L0001730     0.000000424      4.15       5.58       3.21
SRCPARAM L0001731     0.000000424      4.15       5.58       3.21
SRCPARAM L0001732     0.000000424      4.15       5.58       3.21
SRCPARAM L0001733     0.000000424      4.15       5.58       3.21
SRCPARAM L0001734     0.000000424      4.15       5.58       3.21
SRCPARAM L0001735     0.000000424      4.15       5.58       3.21
SRCPARAM L0001736     0.000000424      4.15       5.58       3.21
SRCPARAM L0001737     0.000000424      4.15       5.58       3.21
SRCPARAM L0001738     0.000000424      4.15       5.58       3.21
SRCPARAM L0001739     0.000000424      4.15       5.58       3.21
SRCPARAM L0001740     0.000000424      4.15       5.58       3.21
SRCPARAM L0001741     0.000000424      4.15       5.58       3.21
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   SRCPARAM L0001742     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001743     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001744     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001745     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001746     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001747     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001748     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001749     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001750     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001751     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001752     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001753     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001754     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001755     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001756     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001757     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001758     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001759     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001760     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001761     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001762     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001763     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001764     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001765     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001766     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001767     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001768     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001769     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001770     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001771     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001772     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001773     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001774     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001775     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001776     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001777     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001778     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001779     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001780     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001781     0.000000424      4.15      5.58      3.21
** --------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0001782           0.0      0.60      5.58      3.21
   SRCPARAM L0001783           0.0      0.60      5.58      3.21
   SRCPARAM L0001784           0.0      0.60      5.58      3.21
   SRCPARAM L0001785           0.0      0.60      5.58      3.21
   SRCPARAM L0001786           0.0      0.60      5.58      3.21
   SRCPARAM L0001787           0.0      0.60      5.58      3.21
```

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   SRCPARAM L0001788           0.0      0.60      5.58      3.21
   SRCPARAM L0001789           0.0      0.60      5.58      3.21
   SRCPARAM L0001790           0.0      0.60      5.58      3.21
   SRCPARAM L0001791           0.0      0.60      5.58      3.21
   SRCPARAM L0001792           0.0      0.60      5.58      3.21
   SRCPARAM L0001793           0.0      0.60      5.58      3.21
   SRCPARAM L0001794           0.0      0.60      5.58      3.21
   SRCPARAM L0001795           0.0      0.60      5.58      3.21
   SRCPARAM L0001796           0.0      0.60      5.58      3.21
   SRCPARAM L0001797           0.0      0.60      5.58      3.21
   SRCPARAM L0001798           0.0      0.60      5.58      3.21
   SRCPARAM L0001799           0.0      0.60      5.58      3.21
   SRCPARAM L0001800           0.0      0.60      5.58      3.21
   SRCPARAM L0001801           0.0      0.60      5.58      3.21
   SRCPARAM L0001802           0.0      0.60      5.58      3.21
   SRCPARAM L0001803           0.0      0.60      5.58      3.21
   SRCPARAM L0001804           0.0      0.60      5.58      3.21
   SRCPARAM L0001805           0.0      0.60      5.58      3.21
   SRCPARAM L0001806           0.0      0.60      5.58      3.21
   SRCPARAM L0001807           0.0      0.60      5.58      3.21
   SRCPARAM L0001808           0.0      0.60      5.58      3.21
   SRCPARAM L0001809           0.0      0.60      5.58      3.21
   SRCPARAM L0001810           0.0      0.60      5.58      3.21
   SRCPARAM L0001811           0.0      0.60      5.58      3.21
   SRCPARAM L0001812           0.0      0.60      5.58      3.21
   SRCPARAM L0001813           0.0      0.60      5.58      3.21
   SRCPARAM L0001814           0.0      0.60      5.58      3.21
   SRCPARAM L0001815           0.0      0.60      5.58      3.21
   SRCPARAM L0001816           0.0      0.60      5.58      3.21
   SRCPARAM L0001817           0.0      0.60      5.58      3.21
   SRCPARAM L0001818           0.0      0.60      5.58      3.21
   SRCPARAM L0001819           0.0      0.60      5.58      3.21
   SRCPARAM L0001820           0.0      0.60      5.58      3.21
   SRCPARAM L0001821           0.0      0.60      5.58      3.21
   SRCPARAM L0001822           0.0      0.60      5.58      3.21
   SRCPARAM L0001823           0.0      0.60      5.58      3.21
   SRCPARAM L0001824           0.0      0.60      5.58      3.21
   SRCPARAM L0001825           0.0      0.60      5.58      3.21
   SRCPARAM L0001826           0.0      0.60      5.58      3.21
   SRCPARAM L0001827           0.0      0.60      5.58      3.21
   SRCPARAM L0001828           0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
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   SRCPARAM L0001829           0.0      0.60      5.58      3.21
   SRCPARAM L0001830           0.0      0.60      5.58      3.21
   SRCPARAM L0001831           0.0      0.60      5.58      3.21
   SRCPARAM L0001832           0.0      0.60      5.58      3.21
   SRCPARAM L0001833           0.0      0.60      5.58      3.21
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   SRCPARAM L0001834            0.0      0.60      5.58      3.21
   SRCPARAM L0001835            0.0      0.60      5.58      3.21
   SRCPARAM L0001836            0.0      0.60      5.58      3.21
   SRCPARAM L0001837            0.0      0.60      5.58      3.21
   SRCPARAM L0001838            0.0      0.60      5.58      3.21
   SRCPARAM L0001839            0.0      0.60      5.58      3.21
   SRCPARAM L0001840            0.0      0.60      5.58      3.21
   SRCPARAM L0001841            0.0      0.60      5.58      3.21
   SRCPARAM L0001842            0.0      0.60      5.58      3.21
   SRCPARAM L0001843            0.0      0.60      5.58      3.21
   SRCPARAM L0001844            0.0      0.60      5.58      3.21
   SRCPARAM L0001845            0.0      0.60      5.58      3.21
   SRCPARAM L0001846            0.0      0.60      5.58      3.21
   SRCPARAM L0001847            0.0      0.60      5.58      3.21
   SRCPARAM L0001848            0.0      0.60      5.58      3.21
   SRCPARAM L0001849            0.0      0.60      5.58      3.21
   SRCPARAM L0001850            0.0      0.60      5.58      3.21
   SRCPARAM L0001851            0.0      0.60      5.58      3.21
   SRCPARAM L0001852            0.0      0.60      5.58      3.21
   SRCPARAM L0001853            0.0      0.60      5.58      3.21
   SRCPARAM L0001854            0.0      0.60      5.58      3.21
   SRCPARAM L0001855            0.0      0.60      5.58      3.21
   SRCPARAM L0001856            0.0      0.60      5.58      3.21
   SRCPARAM L0001857            0.0      0.60      5.58      3.21
   SRCPARAM L0001858            0.0      0.60      5.58      3.21
   SRCPARAM L0001859            0.0      0.60      5.58      3.21
   SRCPARAM L0001860            0.0      0.60      5.58      3.21
   SRCPARAM L0001861            0.0      0.60      5.58      3.21
   SRCPARAM L0001862            0.0      0.60      5.58      3.21
   SRCPARAM L0001863            0.0      0.60      5.58      3.21
   SRCPARAM L0001864            0.0      0.60      5.58      3.21
   SRCPARAM L0001865            0.0      0.60      5.58      3.21
   SRCPARAM L0001866            0.0      0.60      5.58      3.21
   SRCPARAM L0001867            0.0      0.60      5.58      3.21
   SRCPARAM L0001868            0.0      0.60      5.58      3.21
   SRCPARAM L0001869            0.0      0.60      5.58      3.21
   SRCPARAM L0001870            0.0      0.60      5.58      3.21
   SRCPARAM L0001871            0.0      0.60      5.58      3.21
   SRCPARAM L0001872            0.0      0.60      5.58      3.21
   SRCPARAM L0001873            0.0      0.60      5.58      3.21
   SRCPARAM L0001874            0.0      0.60      5.58      3.21
   SRCPARAM L0001875            0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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**
**
RE STARTING
   INCLUDED Westport_SR-85_PM.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_SR-85_PM.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_SR-85_PM.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_SR-85_PM.AD\AN00GALL.PLT 33
   SUMMFILE Westport_SR-85_PM.sum
OU FINISHED
**
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** Project Parameters
****************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
**
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**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/20/2018
** File: C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL Westport_SR-85_PM.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ---------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00003816
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
** 584214.591, 4130961.572, 89.16, 4.15, 5.58
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** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001601     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001602     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001603     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001604     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001605     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001606     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001607     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001608     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001609     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001610     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001611     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001612     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001613     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001614     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001615     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001616     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001617     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001618     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001619     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001620     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001621     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001622     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001623     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001624     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001625     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001626     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001627     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001628     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001629     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001630     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001631     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001632     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001633     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001634     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001635     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001636     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001637     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001638     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001639     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001640     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001641     VOLUME   584169.465 4131159.828 86.73
   LOCATION L0001642     VOLUME   584167.177 4131171.608 86.78
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LOCATION L0001643     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001644     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001645     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001646     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001647     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001648     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001649     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001650     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001651     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001652     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001653     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001654     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001655     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001656     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001657     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001658     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001659     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001660     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001661     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001662     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001663     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001664     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001665     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001666     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001667     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001668     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001669     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001670     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001671     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001672     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001673     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001674     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001675     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001676     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001677     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001678     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001679     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001680     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001681     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001682     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001683     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001684     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001685     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001686     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001687     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001688     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001689     VOLUME   584011.260 4131709.957 92.56
LOCATION L0001690     VOLUME   584004.604 4131719.942 92.58
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   LOCATION L0001691     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00003816
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
** 583972.941, 4131730.297, 92.00, 4.15, 5.58
** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0001692     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001693     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001694     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001695     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001696     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001697     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001698     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001699     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001700     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001701     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001702     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001703     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001704     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001705     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001706     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001707     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001708     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001709     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001710     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001711     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001712     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001713     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001714     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001715     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001716     VOLUME   584086.826 4131462.295 89.31
   LOCATION L0001717     VOLUME   584089.956 4131450.711 89.21
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LOCATION L0001718     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001719     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001720     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001721     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001722     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001723     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001724     VOLUME   584111.078 4131369.437 88.73
LOCATION L0001725     VOLUME   584113.337 4131357.651 88.64
LOCATION L0001726     VOLUME   584115.596 4131345.866 88.59
LOCATION L0001727     VOLUME   584117.855 4131334.080 88.54
LOCATION L0001728     VOLUME   584120.114 4131322.295 88.45
LOCATION L0001729     VOLUME   584122.373 4131310.509 88.32
LOCATION L0001730     VOLUME   584124.631 4131298.724 88.17
LOCATION L0001731     VOLUME   584126.890 4131286.938 88.01
LOCATION L0001732     VOLUME   584129.149 4131275.153 87.79
LOCATION L0001733     VOLUME   584131.408 4131263.368 87.53
LOCATION L0001734     VOLUME   584133.667 4131251.582 87.37
LOCATION L0001735     VOLUME   584135.926 4131239.797 87.24
LOCATION L0001736     VOLUME   584138.185 4131228.011 87.18
LOCATION L0001737     VOLUME   584140.444 4131216.226 87.12
LOCATION L0001738     VOLUME   584142.793 4131204.458 87.35
LOCATION L0001739     VOLUME   584145.240 4131192.710 87.68
LOCATION L0001740     VOLUME   584147.688 4131180.963 87.82
LOCATION L0001741     VOLUME   584150.135 4131169.215 87.77
LOCATION L0001742     VOLUME   584152.583 4131157.467 87.57
LOCATION L0001743     VOLUME   584155.030 4131145.719 87.23
LOCATION L0001744     VOLUME   584157.477 4131133.972 86.91
LOCATION L0001745     VOLUME   584159.925 4131122.224 86.95
LOCATION L0001746     VOLUME   584162.372 4131110.476 87.05
LOCATION L0001747     VOLUME   584164.820 4131098.728 87.17
LOCATION L0001748     VOLUME   584167.267 4131086.981 87.32
LOCATION L0001749     VOLUME   584169.715 4131075.233 87.80
LOCATION L0001750     VOLUME   584172.162 4131063.485 88.16
LOCATION L0001751     VOLUME   584174.610 4131051.737 88.38
LOCATION L0001752     VOLUME   584177.057 4131039.989 88.47
LOCATION L0001753     VOLUME   584180.393 4131028.463 88.36
LOCATION L0001754     VOLUME   584183.730 4131016.936 88.28
LOCATION L0001755     VOLUME   584187.066 4131005.409 88.46
LOCATION L0001756     VOLUME   584190.403 4130993.882 88.67
LOCATION L0001757     VOLUME   584193.740 4130982.355 88.92
LOCATION L0001758     VOLUME   584197.076 4130970.829 89.17
LOCATION L0001759     VOLUME   584200.413 4130959.302 89.43
LOCATION L0001760     VOLUME   584203.750 4130947.775 89.63
LOCATION L0001761     VOLUME   584207.087 4130936.248 89.71
LOCATION L0001762     VOLUME   584210.423 4130924.722 89.81
LOCATION L0001763     VOLUME   584213.760 4130913.195 89.97
LOCATION L0001764     VOLUME   584217.097 4130901.668 90.14
LOCATION L0001765     VOLUME   584220.433 4130890.141 90.30
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   LOCATION L0001766     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0001767     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0001768     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0001769     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0001770     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0001771     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0001772     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0001773     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0001774     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0001775     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0001776     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0001777     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0001778     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0001779     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0001780     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0001781     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0001782     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0001783     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0001784     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0001785     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0001786     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0001787     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0001788     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0001789     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0001790     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0001791     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0001792     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0001793     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0001794     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0001795     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0001796     VOLUME   584367.886 4131105.823 91.93
   LOCATION L0001797     VOLUME   584379.884 4131106.028 91.90
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   LOCATION L0001798     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0001799     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0001800     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0001801     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0001802     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0001803     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0001804     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0001805     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0001806     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0001807     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0001808     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0001809     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0001810     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0001811     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0001812     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0001813     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0001814     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0001815     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0001816     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0001817     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0001818     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0001819     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0001820     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0001821     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0001822     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0001823     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0001824     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0001825     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0001826     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0001827     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0001828     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0001829     VOLUME   584749.747 4131127.452 86.14
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   LOCATION L0001830     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0001831     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0001832     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0001833     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0001834     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0001835     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0001836     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0001837     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0001838     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0001839     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0001840     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0001841     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0001842     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0001843     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0001844     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0001845     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0001846     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0001847     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0001848     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0001849     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0001850     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0001851     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0001852     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0001853     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0001854     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0001855     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0001856     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0001857     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0001858     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0001859     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0001860     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0001861     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0001862     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0001863     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0001864     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0001865     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0001866     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0001867     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0001868     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0001869     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0001870     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0001871     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0001872     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0001873     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0001874     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0001875     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
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   SRCPARAM L0001601     0.0000004193      4.15      5.58      2.93
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   SRCPARAM L0001603     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001604     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001605     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001606     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001607     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001608     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001609     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001610     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001611     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001612     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001613     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001614     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001615     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001616     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001617     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001618     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001619     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001620     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001621     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001622     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001623     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001624     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001625     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001626     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001627     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001628     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001629     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001630     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001631     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001632     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001633     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001634     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001635     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001636     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001637     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001638     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001639     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001640     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001641     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001642     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001643     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001644     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001645     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001646     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001647     0.0000004193      4.15      5.58      2.93
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   SRCPARAM L0001648     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001649     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001650     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001651     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001652     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001653     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001654     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001655     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001656     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001657     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001658     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001659     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001660     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001661     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001662     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001663     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001664     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001665     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001666     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001667     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001668     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001669     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001670     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001671     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001672     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001673     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001674     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001675     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001676     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001677     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001678     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001679     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001680     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001681     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001682     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001683     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001684     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001685     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001686     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001687     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001688     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001689     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001690     0.0000004193      4.15      5.58      2.93
   SRCPARAM L0001691     0.0000004193      4.15      5.58      2.93
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
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   SRCPARAM L0001693     0.000000424      4.15      5.58      3.21
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SRCPARAM L0001694     0.000000424      4.15       5.58       3.21
SRCPARAM L0001695     0.000000424      4.15       5.58       3.21
SRCPARAM L0001696     0.000000424      4.15       5.58       3.21
SRCPARAM L0001697     0.000000424      4.15       5.58       3.21
SRCPARAM L0001698     0.000000424      4.15       5.58       3.21
SRCPARAM L0001699     0.000000424      4.15       5.58       3.21
SRCPARAM L0001700     0.000000424      4.15       5.58       3.21
SRCPARAM L0001701     0.000000424      4.15       5.58       3.21
SRCPARAM L0001702     0.000000424      4.15       5.58       3.21
SRCPARAM L0001703     0.000000424      4.15       5.58       3.21
SRCPARAM L0001704     0.000000424      4.15       5.58       3.21
SRCPARAM L0001705     0.000000424      4.15       5.58       3.21
SRCPARAM L0001706     0.000000424      4.15       5.58       3.21
SRCPARAM L0001707     0.000000424      4.15       5.58       3.21
SRCPARAM L0001708     0.000000424      4.15       5.58       3.21
SRCPARAM L0001709     0.000000424      4.15       5.58       3.21
SRCPARAM L0001710     0.000000424      4.15       5.58       3.21
SRCPARAM L0001711     0.000000424      4.15       5.58       3.21
SRCPARAM L0001712     0.000000424      4.15       5.58       3.21
SRCPARAM L0001713     0.000000424      4.15       5.58       3.21
SRCPARAM L0001714     0.000000424      4.15       5.58       3.21
SRCPARAM L0001715     0.000000424      4.15       5.58       3.21
SRCPARAM L0001716     0.000000424      4.15       5.58       3.21
SRCPARAM L0001717     0.000000424      4.15       5.58       3.21
SRCPARAM L0001718     0.000000424      4.15       5.58       3.21
SRCPARAM L0001719     0.000000424      4.15       5.58       3.21
SRCPARAM L0001720     0.000000424      4.15       5.58       3.21
SRCPARAM L0001721     0.000000424      4.15       5.58       3.21
SRCPARAM L0001722     0.000000424      4.15       5.58       3.21
SRCPARAM L0001723     0.000000424      4.15       5.58       3.21
SRCPARAM L0001724     0.000000424      4.15       5.58       3.21
SRCPARAM L0001725     0.000000424      4.15       5.58       3.21
SRCPARAM L0001726     0.000000424      4.15       5.58       3.21
SRCPARAM L0001727     0.000000424      4.15       5.58       3.21
SRCPARAM L0001728     0.000000424      4.15       5.58       3.21
SRCPARAM L0001729     0.000000424      4.15       5.58       3.21
SRCPARAM L0001730     0.000000424      4.15       5.58       3.21
SRCPARAM L0001731     0.000000424      4.15       5.58       3.21
SRCPARAM L0001732     0.000000424      4.15       5.58       3.21
SRCPARAM L0001733     0.000000424      4.15       5.58       3.21
SRCPARAM L0001734     0.000000424      4.15       5.58       3.21
SRCPARAM L0001735     0.000000424      4.15       5.58       3.21
SRCPARAM L0001736     0.000000424      4.15       5.58       3.21
SRCPARAM L0001737     0.000000424      4.15       5.58       3.21
SRCPARAM L0001738     0.000000424      4.15       5.58       3.21
SRCPARAM L0001739     0.000000424      4.15       5.58       3.21
SRCPARAM L0001740     0.000000424      4.15       5.58       3.21
SRCPARAM L0001741     0.000000424      4.15       5.58       3.21
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   SRCPARAM L0001742     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001743     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001744     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001745     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001746     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001747     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001748     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001749     0.000000424      4.15      5.58      3.21
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   SRCPARAM L0001751     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001752     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001753     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001754     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001755     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001756     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001757     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001758     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001759     0.000000424      4.15      5.58      3.21
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   SRCPARAM L0001767     0.000000424      4.15      5.58      3.21
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   SRCPARAM L0001769     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001770     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001771     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001772     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001773     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001774     0.000000424      4.15      5.58      3.21
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   SRCPARAM L0001776     0.000000424      4.15      5.58      3.21
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   SRCPARAM L0001778     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001779     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001780     0.000000424      4.15      5.58      3.21
   SRCPARAM L0001781     0.000000424      4.15      5.58      3.21
** ------------------------------------------------------------------
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   SRCPARAM L0001784           0.0      0.60      5.58      3.21
   SRCPARAM L0001785           0.0      0.60      5.58      3.21
   SRCPARAM L0001786           0.0      0.60      5.58      3.21
   SRCPARAM L0001787           0.0      0.60      5.58      3.21
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   SRCPARAM L0001788           0.0      0.60      5.58      3.21
   SRCPARAM L0001789           0.0      0.60      5.58      3.21
   SRCPARAM L0001790           0.0      0.60      5.58      3.21
   SRCPARAM L0001791           0.0      0.60      5.58      3.21
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   SRCPARAM L0001813           0.0      0.60      5.58      3.21
   SRCPARAM L0001814           0.0      0.60      5.58      3.21
   SRCPARAM L0001815           0.0      0.60      5.58      3.21
   SRCPARAM L0001816           0.0      0.60      5.58      3.21
   SRCPARAM L0001817           0.0      0.60      5.58      3.21
   SRCPARAM L0001818           0.0      0.60      5.58      3.21
   SRCPARAM L0001819           0.0      0.60      5.58      3.21
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   SRCPARAM L0001822           0.0      0.60      5.58      3.21
   SRCPARAM L0001823           0.0      0.60      5.58      3.21
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   SRCPARAM L0001825           0.0      0.60      5.58      3.21
   SRCPARAM L0001826           0.0      0.60      5.58      3.21
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   SRCPARAM L0001828           0.0      0.60      5.58      3.21
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   SRCPARAM L0001830           0.0      0.60      5.58      3.21
   SRCPARAM L0001831           0.0      0.60      5.58      3.21
   SRCPARAM L0001832           0.0      0.60      5.58      3.21
   SRCPARAM L0001833           0.0      0.60      5.58      3.21
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   SRCPARAM L0001853           0.0       0.60       5.58       3.21
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   SRCPARAM L0001855           0.0       0.60       5.58       3.21
   SRCPARAM L0001856           0.0       0.60       5.58       3.21
   SRCPARAM L0001857           0.0       0.60       5.58       3.21
   SRCPARAM L0001858           0.0       0.60       5.58       3.21
   SRCPARAM L0001859           0.0       0.60       5.58       3.21
   SRCPARAM L0001860           0.0       0.60       5.58       3.21
   SRCPARAM L0001861           0.0       0.60       5.58       3.21
   SRCPARAM L0001862           0.0       0.60       5.58       3.21
   SRCPARAM L0001863           0.0       0.60       5.58       3.21
   SRCPARAM L0001864           0.0       0.60       5.58       3.21
   SRCPARAM L0001865           0.0       0.60       5.58       3.21
   SRCPARAM L0001866           0.0       0.60       5.58       3.21
   SRCPARAM L0001867           0.0       0.60       5.58       3.21
   SRCPARAM L0001868           0.0       0.60       5.58       3.21
   SRCPARAM L0001869           0.0       0.60       5.58       3.21
   SRCPARAM L0001870           0.0       0.60       5.58       3.21
   SRCPARAM L0001871           0.0       0.60       5.58       3.21
   SRCPARAM L0001872           0.0       0.60       5.58       3.21
   SRCPARAM L0001873           0.0       0.60       5.58       3.21
   SRCPARAM L0001874           0.0       0.60       5.58       3.21
   SRCPARAM L0001875           0.0       0.60       5.58       3.21
** ----------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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**
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RE STARTING
   INCLUDED Westport_SR-85_PM.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_SR-85_PM.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_SR-85_PM.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_SR-85_PM.AD\AN00GALL.PLT 33
   SUMMFILE Westport_SR-85_PM.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of             0 Fatal Error Message(s)
 A Total of            94 Warning Message(s)
 A Total of             0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
```

```
             ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     571         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     572         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     573         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     574         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     575         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     576         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     577         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     578         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     579         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     580         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     581         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     582         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     583         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     584         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     585         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     586         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     587         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     588         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     589         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     590         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     591         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     592         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

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SO W320     593        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     594        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     595        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     596        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     597        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     598        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     599        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     600        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     601        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     602        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     603        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     604        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     605        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     606        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     607        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     608        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     609        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     610        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     611        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     612        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     613        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     614        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     615        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     616        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     617         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     620         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     621         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     622         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     623         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     624         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     625         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     626         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     627         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     628         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     629         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     630         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     631         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     632         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     633         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     634         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     635         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     636         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     637         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     638         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     639         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     640         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     641         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     642         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

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SO W320     643         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     644         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     645         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     646         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     647         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     648         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     649         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     650         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     651         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     652         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     653         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     654         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     655         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     656         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     657         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     658         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     659         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     660         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     661         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     662         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     663         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     664         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     665         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     666         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

```
 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   275 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   1918000.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
```

```
     and Calculates ANNUAL Averages

 **This Run Includes:    275 Source(s);       1 Source Group(s); and     100
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    275 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  14134

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    11.90 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                               ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Westport_SR-85_PM.err
```

```
 **File for Summary of Results:   Westport_SR-85_PM.sum

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                   BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0001601         0   0.41930E-06  584315.9 4130704.1    92.2     4.15     5.58
2.93     YES
 L0001602         0   0.41930E-06  584311.5 4130715.3    92.0     4.15     5.58
2.93     YES
 L0001603         0   0.41930E-06  584307.1 4130726.5    91.5     4.15     5.58
2.93     YES
 L0001604         0   0.41930E-06  584302.7 4130737.6    91.4     4.15     5.58
2.93     YES
 L0001605         0   0.41930E-06  584298.3 4130748.8    91.4     4.15     5.58
2.93     YES
 L0001606         0   0.41930E-06  584293.9 4130760.0    91.9     4.15     5.58
2.93     YES
 L0001607         0   0.41930E-06  584289.5 4130771.1    91.9     4.15     5.58
2.93     YES
 L0001608         0   0.41930E-06  584285.1 4130782.3    91.4     4.15     5.58
2.93     YES
 L0001609         0   0.41930E-06  584280.7 4130793.5    91.0     4.15     5.58
2.93     YES
 L0001610         0   0.41930E-06  584276.3 4130804.6    90.9     4.15     5.58
2.93     YES
 L0001611         0   0.41930E-06  584271.9 4130815.8    90.8     4.15     5.58
2.93     YES
 L0001612         0   0.41930E-06  584267.5 4130827.0    90.7     4.15     5.58
2.93     YES
 L0001613         0   0.41930E-06  584263.2 4130838.1    90.6     4.15     5.58
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2.93     YES
 L0001614         0   0.41930E-06  584258.8 4130849.3    90.5     4.15     5.58
2.93     YES
 L0001615         0   0.41930E-06  584254.4 4130860.5    90.3     4.15     5.58
2.93     YES
 L0001616         0   0.41930E-06  584250.0 4130871.6    90.2     4.15     5.58
2.93     YES
 L0001617         0   0.41930E-06  584245.6 4130882.8    90.2     4.15     5.58
2.93     YES
 L0001618         0   0.41930E-06  584241.2 4130894.0    90.1     4.15     5.58
2.93     YES
 L0001619         0   0.41930E-06  584236.8 4130905.1    89.9     4.15     5.58
2.93     YES
 L0001620         0   0.41930E-06  584232.4 4130916.3    89.6     4.15     5.58
2.93     YES
 L0001621         0   0.41930E-06  584228.0 4130927.5    89.5     4.15     5.58
2.93     YES
 L0001622         0   0.41930E-06  584223.6 4130938.6    89.4     4.15     5.58
2.93     YES
 L0001623         0   0.41930E-06  584219.2 4130949.8    89.3     4.15     5.58
2.93     YES
 L0001624         0   0.41930E-06  584214.8 4130961.0    89.2     4.15     5.58
2.93     YES
 L0001625         0   0.41930E-06  584212.0 4130972.6    89.0     4.15     5.58
2.93     YES
 L0001626         0   0.41930E-06  584209.2 4130984.3    88.8     4.15     5.58
2.93     YES
 L0001627         0   0.41930E-06  584206.4 4130996.0    88.4     4.15     5.58
2.93     YES
 L0001628         0   0.41930E-06  584203.6 4131007.6    88.2     4.15     5.58
2.93     YES
 L0001629         0   0.41930E-06  584200.8 4131019.3    88.0     4.15     5.58
2.93     YES
 L0001630         0   0.41930E-06  584198.1 4131031.0    87.8     4.15     5.58
2.93     YES
 L0001631         0   0.41930E-06  584195.3 4131042.7    87.6     4.15     5.58
2.93     YES
 L0001632         0   0.41930E-06  584192.5 4131054.3    87.5     4.15     5.58
2.93     YES
 L0001633         0   0.41930E-06  584189.7 4131066.0    87.5     4.15     5.58
2.93     YES
 L0001634         0   0.41930E-06  584186.9 4131077.7    87.5     4.15     5.58
2.93     YES
 L0001635         0   0.41930E-06  584184.2 4131089.4    87.3     4.15     5.58
2.93     YES
 L0001636         0   0.41930E-06  584181.4 4131101.0    87.0     4.15     5.58
2.93     YES
 L0001637         0   0.41930E-06  584178.6 4131112.7    86.9     4.15     5.58
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2.93     YES
 L0001638         0   0.41930E-06  584176.3 4131124.5    86.8     4.15     5.58
2.93     YES
 L0001639         0   0.41930E-06  584174.0 4131136.3    86.8     4.15     5.58
2.93     YES
 L0001640         0   0.41930E-06  584171.8 4131148.0    86.7     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y       ELEV.   HEIGHT       SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0001641         0   0.41930E-06  584169.5 4131159.8    86.7     4.15     5.58
2.93     YES
 L0001642         0   0.41930E-06  584167.2 4131171.6    86.8     4.15     5.58
2.93     YES
 L0001643         0   0.41930E-06  584164.9 4131183.4    86.9     4.15     5.58
2.93     YES
 L0001644         0   0.41930E-06  584162.6 4131195.2    87.1     4.15     5.58
2.93     YES
 L0001645         0   0.41930E-06  584160.3 4131206.9    87.2     4.15     5.58
2.93     YES
 L0001646         0   0.41930E-06  584158.0 4131218.7    87.3     4.15     5.58
2.93     YES
 L0001647         0   0.41930E-06  584155.7 4131230.5    87.3     4.15     5.58
2.93     YES
 L0001648         0   0.41930E-06  584153.5 4131242.3    87.3     4.15     5.58
2.93     YES
 L0001649         0   0.41930E-06  584151.2 4131254.1    87.4     4.15     5.58
2.93     YES
 L0001650         0   0.41930E-06  584148.9 4131265.8    87.5     4.15     5.58
2.93     YES
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 L0001651          0   0.41930E-06  584146.6 4131277.6    87.6     4.15     5.58
2.93     YES
 L0001652          0   0.41930E-06  584144.3 4131289.4    87.8     4.15     5.58
2.93     YES
 L0001653          0   0.41930E-06  584142.0 4131301.2    87.9     4.15     5.58
2.93     YES
 L0001654          0   0.41930E-06  584139.7 4131313.0    88.1     4.15     5.58
2.93     YES
 L0001655          0   0.41930E-06  584137.4 4131324.7    88.4     4.15     5.58
2.93     YES
 L0001656          0   0.41930E-06  584135.1 4131336.5    88.6     4.15     5.58
2.93     YES
 L0001657          0   0.41930E-06  584132.9 4131348.3    88.7     4.15     5.58
2.93     YES
 L0001658          0   0.41930E-06  584130.6 4131360.1    88.8     4.15     5.58
2.93     YES
 L0001659          0   0.41930E-06  584128.3 4131371.9    88.9     4.15     5.58
2.93     YES
 L0001660          0   0.41930E-06  584126.0 4131383.6    89.0     4.15     5.58
2.93     YES
 L0001661          0   0.41930E-06  584123.7 4131395.4    89.2     4.15     5.58
2.93     YES
 L0001662          0   0.41930E-06  584121.4 4131407.2    89.4     4.15     5.58
2.93     YES
 L0001663          0   0.41930E-06  584119.1 4131419.0    89.6     4.15     5.58
2.93     YES
 L0001664          0   0.41930E-06  584116.8 4131430.8    89.8     4.15     5.58
2.93     YES
 L0001665          0   0.41930E-06  584114.6 4131442.5    90.0     4.15     5.58
2.93     YES
 L0001666          0   0.41930E-06  584112.3 4131454.3    90.1     4.15     5.58
2.93     YES
 L0001667          0   0.41930E-06  584109.3 4131465.9    90.2     4.15     5.58
2.93     YES
 L0001668          0   0.41930E-06  584105.6 4131477.3    90.3     4.15     5.58
2.93     YES
 L0001669          0   0.41930E-06  584101.9 4131488.8    90.4     4.15     5.58
2.93     YES
 L0001670          0   0.41930E-06  584098.2 4131500.2    90.5     4.15     5.58
2.93     YES
 L0001671          0   0.41930E-06  584094.6 4131511.6    90.6     4.15     5.58
2.93     YES
 L0001672          0   0.41930E-06  584090.9 4131523.0    90.7     4.15     5.58
2.93     YES
 L0001673          0   0.41930E-06  584087.2 4131534.5    90.9     4.15     5.58
2.93     YES
 L0001674          0   0.41930E-06  584083.5 4131545.9    91.0     4.15     5.58
2.93     YES
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 L0001675         0   0.41930E-06  584079.4 4131557.1    91.1     4.15     5.58
2.93     YES
 L0001676         0   0.41930E-06  584075.0 4131568.3    91.3     4.15     5.58
2.93     YES
 L0001677         0   0.41930E-06  584070.7 4131579.5    91.4     4.15     5.58
2.93     YES
 L0001678         0   0.41930E-06  584066.3 4131590.7    91.5     4.15     5.58
2.93     YES
 L0001679         0   0.41930E-06  584062.0 4131601.9    91.7     4.15     5.58
2.93     YES
 L0001680         0   0.41930E-06  584057.6 4131613.0    91.8     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***       14:27:24

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                   *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
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 L0001681         0   0.41930E-06  584053.3 4131624.2    92.0     4.15     5.58
2.93     YES
 L0001682         0   0.41930E-06  584048.9 4131635.4    92.0     4.15     5.58
2.93     YES
 L0001683         0   0.41930E-06  584044.6 4131646.6    92.1     4.15     5.58
2.93     YES
 L0001684         0   0.41930E-06  584040.2 4131657.8    92.2     4.15     5.58
2.93     YES
 L0001685         0   0.41930E-06  584035.9 4131669.0    92.4     4.15     5.58
2.93     YES
 L0001686         0   0.41930E-06  584031.2 4131680.0    92.4     4.15     5.58
2.93     YES
 L0001687         0   0.41930E-06  584024.6 4131690.0    92.5     4.15     5.58
2.93     YES
 L0001688         0   0.41930E-06  584017.9 4131700.0    92.5     4.15     5.58
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2.93     YES
 L0001689         0   0.41930E-06  584011.3 4131710.0    92.6     4.15     5.58
2.93     YES
 L0001690         0   0.41930E-06  584004.6 4131719.9    92.6     4.15     5.58
2.93     YES
 L0001691         0   0.41930E-06  583997.9 4131729.9    92.6     4.15     5.58
2.93     YES
 L0001692         0   0.42400E-06  583976.3 4131725.3    91.9     4.15     5.58
3.21     YES
 L0001693         0   0.42400E-06  583983.1 4131715.4    91.9     4.15     5.58
3.21     YES
 L0001694         0   0.42400E-06  583989.9 4131705.5    91.9     4.15     5.58
3.21     YES
 L0001695         0   0.42400E-06  583996.7 4131695.6    92.0     4.15     5.58
3.21     YES
 L0001696         0   0.42400E-06  584003.5 4131685.8    91.7     4.15     5.58
3.21     YES
 L0001697         0   0.42400E-06  584010.2 4131675.9    91.7     4.15     5.58
3.21     YES
 L0001698         0   0.42400E-06  584017.0 4131666.0    91.9     4.15     5.58
3.21     YES
 L0001699         0   0.42400E-06  584023.8 4131656.1    91.9     4.15     5.58
3.21     YES
 L0001700         0   0.42400E-06  584028.5 4131645.1    91.6     4.15     5.58
3.21     YES
 L0001701         0   0.42400E-06  584032.5 4131633.8    91.4     4.15     5.58
3.21     YES
 L0001702         0   0.42400E-06  584036.5 4131622.4    91.3     4.15     5.58
3.21     YES
 L0001703         0   0.42400E-06  584040.5 4131611.1    91.2     4.15     5.58
3.21     YES
 L0001704         0   0.42400E-06  584044.5 4131599.8    91.2     4.15     5.58
3.21     YES
 L0001705         0   0.42400E-06  584048.5 4131588.5    91.1     4.15     5.58
3.21     YES
 L0001706         0   0.42400E-06  584052.5 4131577.2    90.8     4.15     5.58
3.21     YES
 L0001707         0   0.42400E-06  584056.5 4131565.9    90.6     4.15     5.58
3.21     YES
 L0001708         0   0.42400E-06  584060.5 4131554.6    90.4     4.15     5.58
3.21     YES
 L0001709         0   0.42400E-06  584064.5 4131543.2    90.3     4.15     5.58
3.21     YES
 L0001710         0   0.42400E-06  584068.0 4131531.8    90.2     4.15     5.58
3.21     YES
 L0001711         0   0.42400E-06  584071.2 4131520.2    90.0     4.15     5.58
3.21     YES
 L0001712         0   0.42400E-06  584074.3 4131508.6    90.2     4.15     5.58
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3.21     YES
 L0001713         0   0.42400E-06  584077.4 4131497.0    90.0     4.15     5.58
3.21     YES
 L0001714         0   0.42400E-06  584080.6 4131485.5    89.5     4.15     5.58
3.21     YES
 L0001715         0   0.42400E-06  584083.7 4131473.9    89.4     4.15     5.58
3.21     YES
 L0001716         0   0.42400E-06  584086.8 4131462.3    89.3     4.15     5.58
3.21     YES
 L0001717         0   0.42400E-06  584090.0 4131450.7    89.2     4.15     5.58
3.21     YES
 L0001718         0   0.42400E-06  584093.1 4131439.1    89.1     4.15     5.58
3.21     YES
 L0001719         0   0.42400E-06  584096.2 4131427.5    89.0     4.15     5.58
3.21     YES
 L0001720         0   0.42400E-06  584099.3 4131416.0    89.2     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                      *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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 L0001721         0   0.42400E-06  584102.5 4131404.4    89.2     4.15     5.58
3.21     YES
 L0001722         0   0.42400E-06  584105.6 4131392.8    89.0     4.15     5.58
3.21     YES
 L0001723         0   0.42400E-06  584108.7 4131381.2    88.9     4.15     5.58
3.21     YES
 L0001724         0   0.42400E-06  584111.1 4131369.4    88.7     4.15     5.58
3.21     YES
 L0001725         0   0.42400E-06  584113.3 4131357.7    88.6     4.15     5.58
3.21     YES
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 L0001726         0   0.42400E-06  584115.6 4131345.9    88.6     4.15     5.58
3.21     YES
 L0001727         0   0.42400E-06  584117.9 4131334.1    88.5     4.15     5.58
3.21     YES
 L0001728         0   0.42400E-06  584120.1 4131322.3    88.5     4.15     5.58
3.21     YES
 L0001729         0   0.42400E-06  584122.4 4131310.5    88.3     4.15     5.58
3.21     YES
 L0001730         0   0.42400E-06  584124.6 4131298.7    88.2     4.15     5.58
3.21     YES
 L0001731         0   0.42400E-06  584126.9 4131286.9    88.0     4.15     5.58
3.21     YES
 L0001732         0   0.42400E-06  584129.1 4131275.2    87.8     4.15     5.58
3.21     YES
 L0001733         0   0.42400E-06  584131.4 4131263.4    87.5     4.15     5.58
3.21     YES
 L0001734         0   0.42400E-06  584133.7 4131251.6    87.4     4.15     5.58
3.21     YES
 L0001735         0   0.42400E-06  584135.9 4131239.8    87.2     4.15     5.58
3.21     YES
 L0001736         0   0.42400E-06  584138.2 4131228.0    87.2     4.15     5.58
3.21     YES
 L0001737         0   0.42400E-06  584140.4 4131216.2    87.1     4.15     5.58
3.21     YES
 L0001738         0   0.42400E-06  584142.8 4131204.5    87.3     4.15     5.58
3.21     YES
 L0001739         0   0.42400E-06  584145.2 4131192.7    87.7     4.15     5.58
3.21     YES
 L0001740         0   0.42400E-06  584147.7 4131181.0    87.8     4.15     5.58
3.21     YES
 L0001741         0   0.42400E-06  584150.1 4131169.2    87.8     4.15     5.58
3.21     YES
 L0001742         0   0.42400E-06  584152.6 4131157.5    87.6     4.15     5.58
3.21     YES
 L0001743         0   0.42400E-06  584155.0 4131145.7    87.2     4.15     5.58
3.21     YES
 L0001744         0   0.42400E-06  584157.5 4131134.0    86.9     4.15     5.58
3.21     YES
 L0001745         0   0.42400E-06  584159.9 4131122.2    87.0     4.15     5.58
3.21     YES
 L0001746         0   0.42400E-06  584162.4 4131110.5    87.0     4.15     5.58
3.21     YES
 L0001747         0   0.42400E-06  584164.8 4131098.7    87.2     4.15     5.58
3.21     YES
 L0001748         0   0.42400E-06  584167.3 4131087.0    87.3     4.15     5.58
3.21     YES
 L0001749         0   0.42400E-06  584169.7 4131075.2    87.8     4.15     5.58
3.21     YES
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 L0001750         0   0.42400E-06  584172.2 4131063.5    88.2     4.15     5.58
3.21     YES
 L0001751         0   0.42400E-06  584174.6 4131051.7    88.4     4.15     5.58
3.21     YES
 L0001752         0   0.42400E-06  584177.1 4131040.0    88.5     4.15     5.58
3.21     YES
 L0001753         0   0.42400E-06  584180.4 4131028.5    88.4     4.15     5.58
3.21     YES
 L0001754         0   0.42400E-06  584183.7 4131016.9    88.3     4.15     5.58
3.21     YES
 L0001755         0   0.42400E-06  584187.1 4131005.4    88.5     4.15     5.58
3.21     YES
 L0001756         0   0.42400E-06  584190.4 4130993.9    88.7     4.15     5.58
3.21     YES
 L0001757         0   0.42400E-06  584193.7 4130982.4    88.9     4.15     5.58
3.21     YES
 L0001758         0   0.42400E-06  584197.1 4130970.8    89.2     4.15     5.58
3.21     YES
 L0001759         0   0.42400E-06  584200.4 4130959.3    89.4     4.15     5.58
3.21     YES
 L0001760         0   0.42400E-06  584203.8 4130947.8    89.6     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   *** 
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 *** AERMET - VERSION  14134 ***   *** 
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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 L0001761         0   0.42400E-06  584207.1 4130936.2    89.7     4.15     5.58
3.21     YES
 L0001762         0   0.42400E-06  584210.4 4130924.7    89.8     4.15     5.58
3.21     YES
 L0001763         0   0.42400E-06  584213.8 4130913.2    90.0     4.15     5.58
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3.21      YES
 L0001764          0   0.42400E-06  584217.1 4130901.7    90.1      4.15      5.58
3.21      YES
 L0001765          0   0.42400E-06  584220.4 4130890.1    90.3      4.15      5.58
3.21      YES
 L0001766          0   0.42400E-06  584223.8 4130878.6    90.5      4.15      5.58
3.21      YES
 L0001767          0   0.42400E-06  584228.2 4130867.4    90.7      4.15      5.58
3.21      YES
 L0001768          0   0.42400E-06  584232.6 4130856.3    90.8      4.15      5.58
3.21      YES
 L0001769          0   0.42400E-06  584237.0 4130845.1    90.8      4.15      5.58
3.21      YES
 L0001770          0   0.42400E-06  584241.4 4130834.0    90.8      4.15      5.58
3.21      YES
 L0001771          0   0.42400E-06  584245.8 4130822.8    90.8      4.15      5.58
3.21      YES
 L0001772          0   0.42400E-06  584250.2 4130811.6    90.9      4.15      5.58
3.21      YES
 L0001773          0   0.42400E-06  584254.6 4130800.5    91.4      4.15      5.58
3.21      YES
 L0001774          0   0.42400E-06  584259.0 4130789.3    91.1      4.15      5.58
3.21      YES
 L0001775          0   0.42400E-06  584263.4 4130778.2    91.2      4.15      5.58
3.21      YES
 L0001776          0   0.42400E-06  584267.9 4130767.0    91.2      4.15      5.58
3.21      YES
 L0001777          0   0.42400E-06  584272.3 4130755.8    91.3      4.15      5.58
3.21      YES
 L0001778          0   0.42400E-06  584276.7 4130744.7    91.7      4.15      5.58
3.21      YES
 L0001779          0   0.42400E-06  584281.1 4130733.5    91.8      4.15      5.58
3.21      YES
 L0001780          0   0.42400E-06  584285.5 4130722.4    91.5      4.15      5.58
3.21      YES
 L0001781          0   0.42400E-06  584289.9 4130711.2    91.5      4.15      5.58
3.21      YES
 L0001782          0   0.00000E+00  584199.9 4131101.3    89.1      0.60      5.58
3.21      YES
 L0001783          0   0.00000E+00  584211.9 4131101.6    90.6      0.60      5.58
3.21      YES
 L0001784          0   0.00000E+00  584223.9 4131101.9    92.2      0.60      5.58
3.21      YES
 L0001785          0   0.00000E+00  584235.9 4131102.3    93.2      0.60      5.58
3.21      YES
 L0001786          0   0.00000E+00  584247.9 4131102.6    93.0      0.60      5.58
3.21      YES
 L0001787          0   0.00000E+00  584259.9 4131102.9    93.0      0.60      5.58
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3.21     YES
 L0001788         0   0.00000E+00  584271.9 4131103.3    93.2     0.60     5.58
3.21     YES
 L0001789         0   0.00000E+00  584283.9 4131103.6    93.2     0.60     5.58
3.21     YES
 L0001790         0   0.00000E+00  584295.9 4131103.9    93.0     0.60     5.58
3.21     YES
 L0001791         0   0.00000E+00  584307.9 4131104.3    92.6     0.60     5.58
3.21     YES
 L0001792         0   0.00000E+00  584319.9 4131104.6    92.3     0.60     5.58
3.21     YES
 L0001793         0   0.00000E+00  584331.9 4131104.9    92.0     0.60     5.58
3.21     YES
 L0001794         0   0.00000E+00  584343.9 4131105.3    92.0     0.60     5.58
3.21     YES
 L0001795         0   0.00000E+00  584355.9 4131105.6    91.9     0.60     5.58
3.21     YES
 L0001796         0   0.00000E+00  584367.9 4131105.8    91.9     0.60     5.58
3.21     YES
 L0001797         0   0.00000E+00  584379.9 4131106.0    91.9     0.60     5.58
3.21     YES
 L0001798         0   0.00000E+00  584391.9 4131106.2    91.6     0.60     5.58
3.21     YES
 L0001799         0   0.00000E+00  584403.9 4131106.4    91.4     0.60     5.58
3.21     YES
 L0001800         0   0.00000E+00  584415.9 4131106.6    91.3     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                   *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
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 L0001801         0   0.00000E+00  584427.9 4131106.8    91.2      0.60     5.58
3.21     YES
 L0001802         0   0.00000E+00  584439.9 4131107.1    91.0      0.60     5.58
3.21     YES
 L0001803         0   0.00000E+00  584451.9 4131107.3    90.9      0.60     5.58
3.21     YES
 L0001804         0   0.00000E+00  584463.9 4131107.5    90.8      0.60     5.58
3.21     YES
 L0001805         0   0.00000E+00  584475.9 4131107.7    90.6      0.60     5.58
3.21     YES
 L0001806         0   0.00000E+00  584487.9 4131107.9    90.2      0.60     5.58
3.21     YES
 L0001807         0   0.00000E+00  584499.9 4131108.1    89.8      0.60     5.58
3.21     YES
 L0001808         0   0.00000E+00  584511.9 4131108.3    89.6      0.60     5.58
3.21     YES
 L0001809         0   0.00000E+00  584523.9 4131108.5    89.4      0.60     5.58
3.21     YES
 L0001810         0   0.00000E+00  584535.9 4131108.7    89.4      0.60     5.58
3.21     YES
 L0001811         0   0.00000E+00  584547.9 4131108.9    89.5      0.60     5.58
3.21     YES
 L0001812         0   0.00000E+00  584559.9 4131109.1    89.4      0.60     5.58
3.21     YES
 L0001813         0   0.00000E+00  584571.9 4131109.3    89.2      0.60     5.58
3.21     YES
 L0001814         0   0.00000E+00  584583.9 4131109.5    89.0      0.60     5.58
3.21     YES
 L0001815         0   0.00000E+00  584595.9 4131109.7    88.8      0.60     5.58
3.21     YES
 L0001816         0   0.00000E+00  584607.9 4131109.9    88.6      0.60     5.58
3.21     YES
 L0001817         0   0.00000E+00  584619.8 4131110.1    88.3      0.60     5.58
3.21     YES
 L0001818         0   0.00000E+00  584631.8 4131110.3    88.1      0.60     5.58
3.21     YES
 L0001819         0   0.00000E+00  584643.8 4131110.5    87.9      0.60     5.58
3.21     YES
 L0001820         0   0.00000E+00  584655.8 4131110.7    87.8      0.60     5.58
3.21     YES
 L0001821         0   0.00000E+00  584667.8 4131110.9    87.7      0.60     5.58
3.21     YES
 L0001822         0   0.00000E+00  584679.8 4131111.1    87.5      0.60     5.58
3.21     YES
 L0001823         0   0.00000E+00  584691.8 4131111.4    87.4      0.60     5.58
3.21     YES
 L0001824         0   0.00000E+00  584703.8 4131111.6    87.3      0.60     5.58
3.21     YES
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 L0001825         0   0.00000E+00  584715.8 4131111.8    87.0     0.60     5.58
3.21     YES
 L0001826         0   0.00000E+00  584727.8 4131112.0    86.7     0.60     5.58
3.21     YES
 L0001827         0   0.00000E+00  584739.8 4131112.2    86.4     0.60     5.58
3.21     YES
 L0001828         0   0.00000E+00  584751.8 4131112.4    86.2     0.60     5.58
3.21     YES
 L0001829         0   0.00000E+00  584749.7 4131127.5    86.1     0.60     5.58
3.21     YES
 L0001830         0   0.00000E+00  584737.7 4131127.3    86.3     0.60     5.58
3.21     YES
 L0001831         0   0.00000E+00  584725.7 4131127.2    86.5     0.60     5.58
3.21     YES
 L0001832         0   0.00000E+00  584713.8 4131127.0    86.7     0.60     5.58
3.21     YES
 L0001833         0   0.00000E+00  584701.8 4131126.9    86.9     0.60     5.58
3.21     YES
 L0001834         0   0.00000E+00  584689.8 4131126.7    87.2     0.60     5.58
3.21     YES
 L0001835         0   0.00000E+00  584677.8 4131126.6    87.4     0.60     5.58
3.21     YES
 L0001836         0   0.00000E+00  584665.8 4131126.5    87.6     0.60     5.58
3.21     YES
 L0001837         0   0.00000E+00  584653.8 4131126.3    87.7     0.60     5.58
3.21     YES
 L0001838         0   0.00000E+00  584641.8 4131126.2    87.9     0.60     5.58
3.21     YES
 L0001839         0   0.00000E+00  584629.8 4131126.0    88.0     0.60     5.58
3.21     YES
 L0001840         0   0.00000E+00  584617.8 4131125.9    88.2     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
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    ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -


 L0001841         0   0.00000E+00  584605.8 4131125.7    88.4     0.60     5.58
3.21     YES
 L0001842         0   0.00000E+00  584593.8 4131125.6    88.6     0.60     5.58
3.21     YES
 L0001843         0   0.00000E+00  584581.8 4131125.5    88.8     0.60     5.58
3.21     YES
 L0001844         0   0.00000E+00  584569.8 4131125.3    89.0     0.60     5.58
3.21     YES
 L0001845         0   0.00000E+00  584557.8 4131125.2    89.1     0.60     5.58
3.21     YES
 L0001846         0   0.00000E+00  584545.8 4131125.0    89.2     0.60     5.58
3.21     YES
 L0001847         0   0.00000E+00  584533.8 4131124.9    89.3     0.60     5.58
3.21     YES
 L0001848         0   0.00000E+00  584521.8 4131124.7    89.4     0.60     5.58
3.21     YES
 L0001849         0   0.00000E+00  584509.8 4131124.6    89.6     0.60     5.58
3.21     YES
 L0001850         0   0.00000E+00  584497.8 4131124.5    89.8     0.60     5.58
3.21     YES
 L0001851         0   0.00000E+00  584485.8 4131124.3    90.0     0.60     5.58
3.21     YES
 L0001852         0   0.00000E+00  584473.8 4131124.2    90.2     0.60     5.58
3.21     YES
 L0001853         0   0.00000E+00  584461.8 4131124.0    90.3     0.60     5.58
3.21     YES
 L0001854         0   0.00000E+00  584449.8 4131123.9    90.5     0.60     5.58
3.21     YES
 L0001855         0   0.00000E+00  584437.8 4131123.7    90.7     0.60     5.58
3.21     YES
 L0001856         0   0.00000E+00  584425.8 4131123.6    90.9     0.60     5.58
3.21     YES
 L0001857         0   0.00000E+00  584413.8 4131123.5    91.1     0.60     5.58
3.21     YES
 L0001858         0   0.00000E+00  584401.8 4131123.3    91.2     0.60     5.58
3.21     YES
 L0001859         0   0.00000E+00  584389.8 4131123.2    91.4     0.60     5.58
3.21     YES
 L0001860         0   0.00000E+00  584377.8 4131123.0    91.5     0.60     5.58
3.21     YES
 L0001861         0   0.00000E+00  584365.8 4131123.0    91.7     0.60     5.58
3.21     YES
 L0001862         0   0.00000E+00  584353.8 4131122.9    91.8     0.60     5.58
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3.21     YES
 L0001863         0   0.00000E+00  584341.8 4131122.9    92.0     0.60     5.58
3.21     YES
 L0001864         0   0.00000E+00  584329.8 4131122.8    92.1     0.60     5.58
3.21     YES
 L0001865         0   0.00000E+00  584317.8 4131122.8    92.3     0.60     5.58
3.21     YES
 L0001866         0   0.00000E+00  584305.8 4131122.7    92.4     0.60     5.58
3.21     YES
 L0001867         0   0.00000E+00  584293.8 4131122.7    92.5     0.60     5.58
3.21     YES
 L0001868         0   0.00000E+00  584281.8 4131122.6    92.6     0.60     5.58
3.21     YES
 L0001869         0   0.00000E+00  584269.8 4131122.6    92.8     0.60     5.58
3.21     YES
 L0001870         0   0.00000E+00  584257.8 4131122.5    92.9     0.60     5.58
3.21     YES
 L0001871         0   0.00000E+00  584245.8 4131122.5    93.1     0.60     5.58
3.21     YES
 L0001872         0   0.00000E+00  584233.8 4131122.4    93.2     0.60     5.58
3.21     YES
 L0001873         0   0.00000E+00  584221.8 4131122.4    92.5     0.60     5.58
3.21     YES
 L0001874         0   0.00000E+00  584209.8 4131122.3    91.6     0.60     5.58
3.21     YES
 L0001875         0   0.00000E+00  584197.8 4131122.3    89.8     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   *** 
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                           *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                             SOURCE IDs
 -----------                                             ----------


  ALL        L0001601    , L0001602    , L0001603    , L0001604    , L0001605    ,
L0001606    , L0001607    , L0001608    ,

             L0001609    , L0001610    , L0001611    , L0001612    , L0001613    ,
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L0001614    , L0001615    , L0001616    ,

             L0001617    , L0001618    , L0001619    , L0001620    , L0001621    ,
L0001622    , L0001623    , L0001624    ,

             L0001625    , L0001626    , L0001627    , L0001628    , L0001629    ,
L0001630    , L0001631    , L0001632    ,

             L0001633    , L0001634    , L0001635    , L0001636    , L0001637    ,
L0001638    , L0001639    , L0001640    ,

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L0001702    , L0001703    , L0001704    ,

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L0001710    , L0001711    , L0001712    ,

             L0001713    , L0001714    , L0001715    , L0001716    , L0001717    ,
L0001718    , L0001719    , L0001720    ,

             L0001721    , L0001722    , L0001723    , L0001724    , L0001725    ,
L0001726    , L0001727    , L0001728    ,

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L0001742    , L0001743    , L0001744    ,

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L0001758    , L0001759    , L0001760    ,
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                              SOURCE IDs
 -----------                                              ----------



             L0001761    , L0001762    , L0001763    , L0001764    , L0001765    ,
L0001766    , L0001767    , L0001768    ,

             L0001769    , L0001770    , L0001771    , L0001772    , L0001773    ,
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L0001806    , L0001807    , L0001808    ,

             L0001809    , L0001810    , L0001811    , L0001812    , L0001813    ,
L0001814    , L0001815    , L0001816    ,

             L0001817    , L0001818    , L0001819    , L0001820    , L0001821    ,
L0001822    , L0001823    , L0001824    ,
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L0001862    , L0001863    , L0001864    ,

             L0001865    , L0001866    , L0001867    , L0001868    , L0001869    ,
L0001870    , L0001871    , L0001872    ,

             L0001873    , L0001874    , L0001875    ,
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


              1918000.   L0001601    , L0001602    , L0001603    , L0001604    ,
L0001605    , L0001606    , L0001607    ,
 L0001608    ,

             L0001609    , L0001610    , L0001611    , L0001612    , L0001613    ,
L0001614    , L0001615    , L0001616    ,

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L0001622    , L0001623    , L0001624    ,

             L0001625    , L0001626    , L0001627    , L0001628    , L0001629    ,
L0001630    , L0001631    , L0001632    ,
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L0001758    , L0001759    , L0001760    ,
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♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                         SOURCE IDs
  --------   ---------                                         ----------


             L0001761    , L0001762    , L0001763    , L0001764    , L0001765    ,
L0001766    , L0001767    , L0001768    ,

             L0001769    , L0001770    , L0001771    , L0001772    , L0001773    ,
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L0001822    , L0001823    , L0001824    ,

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L0001838    , L0001839    , L0001840    ,

             L0001841    , L0001842    , L0001843    , L0001844    , L0001845    ,
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L0001870    , L0001871    , L0001872    ,

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♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                     *** DISCRETE CARTESIAN RECEPTORS ***
                                                   (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                   (METERS)

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     ( 584331.4, 4131146.6,      91.5,      91.5,       0.0);         ( 584351.4,
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     ( 584371.4, 4131146.6,      90.8,      90.8,       0.0);         ( 584391.4,
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     ( 584451.4, 4131146.6,      90.0,      90.0,       0.0);         ( 584471.4,
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     ( 584491.4, 4131146.6,      89.8,      89.8,       0.0);         ( 584511.4,
4131146.6,      89.3,      89.3,       0.0);
     ( 584231.4, 4131166.6,      91.4,      91.4,       0.0);         ( 584251.4,
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     ( 584271.4, 4131166.6,      91.6,      91.6,       0.0);         ( 584291.4,
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     ( 584371.4, 4131226.6,      90.4,      90.4,       0.0);         ( 584391.4,
4131226.6,      90.3,      90.3,       0.0);
     ( 584411.4, 4131226.6,      90.1,      90.1,       0.0);         ( 584431.4,
4131226.6,      89.8,      89.8,       0.0);
     ( 584451.4, 4131226.6,      89.1,      89.1,       0.0);         ( 584471.4,
4131226.6,      89.0,      89.0,       0.0);
     ( 584491.4, 4131226.6,      88.6,      88.6,       0.0);         ( 584211.4,
```

```
4131246.6,      89.6,      92.5,       0.0);
     ( 584231.4, 4131246.6,      92.5,      92.5,       0.0);         ( 584251.4,
4131246.6,      91.9,      91.9,       0.0);
     ( 584271.4, 4131246.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131246.6,      91.2,      91.2,       0.0);
     ( 584311.4, 4131246.6,      90.8,      90.8,       0.0);         ( 584331.4,
4131246.6,      90.6,      90.6,       0.0);
     ( 584351.4, 4131246.6,      90.4,      90.4,       0.0);         ( 584371.4,
4131246.6,      90.1,      90.1,       0.0);
     ( 584391.4, 4131246.6,      90.1,      90.1,       0.0);         ( 584411.4,
4131246.6,      90.0,      90.0,       0.0);
     ( 584431.4, 4131246.6,      89.7,      89.7,       0.0);         ( 584451.4,
4131246.6,      88.8,      88.8,       0.0);
     ( 584471.4, 4131246.6,      88.8,      88.8,       0.0);         ( 584211.4,
4131266.6,      90.8,      92.8,       0.0);
     ( 584231.4, 4131266.6,      92.6,      92.6,       0.0);         ( 584251.4,
4131266.6,      91.9,      91.9,       0.0);
     ( 584271.4, 4131266.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131266.6,      91.0,      91.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                    *** DISCRETE CARTESIAN RECEPTORS ***
                                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                (METERS)

     ( 584211.4, 4131286.6,      91.8,      91.8,       0.0);         ( 584231.4,
4131286.6,      92.5,      92.5,       0.0);
     ( 584251.4, 4131286.6,      92.1,      92.1,       0.0);         ( 584211.4,
4131306.6,      92.6,      92.6,       0.0);
     ( 584231.4, 4131306.6,      92.3,      92.3,       0.0);         ( 584191.4,
4131326.6,      89.8,      92.8,       0.0);
     ( 584211.4, 4131326.6,      92.6,      92.6,       0.0);         ( 584191.4,
4131346.6,      91.0,      91.0,       0.0);
     ( 584171.4, 4131366.6,      91.8,      93.2,       0.0);         ( 584191.4,
4131366.6,      93.0,      93.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24
```

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                                                  PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                          *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                              (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                          *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                                           (METERS/SEC)

                                                          1.54,   3.09,   5.14,   8.23,
10.80,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   Met Data\745090.SFC
                  Met Version:  14134
```

```
   Profile file:   Met Data\745090.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:    23244                  Upper air station no.:    23230
                  Name: UNKNOWN                                   Name:
OAKLAND/WSO_AP
                  Year:   2009                                    Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01  -12.1  0.213 -9.000 -9.000 -999.  236.     72.6  0.09   0.54
1.00    2.86    1.   10.0  282.5    2.0
 09 01 01   1 02  -14.9  0.261 -9.000 -9.000 -999.  321.    109.2  0.09   0.54
1.00    3.36   18.   10.0  282.0    2.0
 09 01 01   1 03   -9.1  0.160 -9.000 -9.000 -999.  158.     40.7  0.09   0.54
1.00    2.36   24.   10.0  282.0    2.0
 09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.4    2.0
 09 01 01   1 05   -3.9  0.075 -9.000 -9.000 -999.   49.      9.8  0.09   0.54
1.00    1.76   23.   10.0  281.4    2.0
 09 01 01   1 06   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36    2.   10.0  280.9    2.0
 09 01 01   1 07   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36   15.   10.0  280.9    2.0
 09 01 01   1 08   -4.7  0.084 -9.000 -9.000 -999.   61.     11.7  0.15   0.54
0.73    1.76  323.   10.0  280.9    2.0
 09 01 01   1 09   -4.9  0.212 -9.000 -9.000 -999.  234.    179.0  0.15   0.54
0.38    2.36  357.   10.0  280.4    2.0
 09 01 01   1 10    5.7  0.163  0.241  0.014   89.  159.    -69.3  0.09   0.54
0.25    1.76   11.   10.0  280.9    2.0
 09 01 01   1 11   12.2 -9.000 -9.000 -9.000  158. -999. -99999.0  0.24   0.54
0.21    0.00    0.   10.0  280.9    2.0
 09 01 01   1 12   16.0  0.426  0.456  0.016  216.  668.   -442.4  0.15   0.54
0.19    4.36  346.   10.0  281.4    2.0
 09 01 01   1 13   16.6  0.236  0.493  0.015  263.  305.    -71.8  0.36   0.54
0.19    1.76  253.   10.0  281.4    2.0
 09 01 01   1 14   14.2 -9.000 -9.000 -9.000  297. -999. -99999.0  0.24   0.54
0.20    0.00    0.   10.0  282.0    2.0
 09 01 01   1 15   44.9 -9.000 -9.000 -9.000  387. -999. -99999.0  0.24   0.54
0.23    0.00    0.   10.0  283.8    2.0
 09 01 01   1 16   13.2 -9.000 -9.000 -9.000  410. -999. -99999.0  0.24   0.54
0.31    0.00    0.   10.0  284.1    2.0
```

```
 09 01 01   1 17  -12.3  0.130 -9.000 -9.000 -999.  112.     16.2  0.15   0.54
0.55    2.36  351.   10.0  282.1    2.0
 09 01 01   1 18   -9.3  0.106 -9.000 -9.000 -999.   83.     11.6  0.36   0.54
1.00    1.76  297.   10.0  282.1    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  280.1    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 09 01 01 01   10.0 1    1.    2.86   282.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                  *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0001601    , L0001602
 , L0001603    , L0001604    , L0001605    ,
                 L0001606    , L0001607    , L0001608    , L0001609    , L0001610
 , L0001611    , L0001612    , L0001613    ,
                 L0001614    , L0001615    , L0001616    , L0001617    , L0001618
 , L0001619    , L0001620    , L0001621    ,
                 L0001622    , L0001623    , L0001624    , L0001625    , L0001626
 , L0001627    , L0001628    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **
```

```
       X-COORD (M)   Y-COORD (M)        CONC                           X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         584291.38    4131146.65        0.00093                          584311.38
4131146.65        0.00080
         584331.38    4131146.65        0.00070                          584351.38
4131146.65        0.00062
         584371.38    4131146.65        0.00055                          584391.38
4131146.65        0.00049
         584411.38    4131146.65        0.00044                          584431.38
4131146.65        0.00040
         584451.38    4131146.65        0.00037                          584471.38
4131146.65        0.00034
         584491.38    4131146.65        0.00031                          584511.38
4131146.65        0.00029
         584231.38    4131166.65        0.00158                          584251.38
4131166.65        0.00128
         584271.38    4131166.65        0.00105                          584291.38
4131166.65        0.00090
         584311.38    4131166.65        0.00077                          584331.38
4131166.65        0.00068
         584351.38    4131166.65        0.00060                          584371.38
4131166.65        0.00053
         584391.38    4131166.65        0.00048                          584411.38
4131166.65        0.00043
         584431.38    4131166.65        0.00039                          584451.38
4131166.65        0.00036
         584471.38    4131166.65        0.00033                          584491.38
4131166.65        0.00030
         584511.38    4131166.65        0.00028                          584231.38
4131186.65        0.00151
         584251.38    4131186.65        0.00122                          584271.38
4131186.65        0.00101
         584291.38    4131186.65        0.00086                          584311.38
4131186.65        0.00075
         584331.38    4131186.65        0.00065                          584351.38
4131186.65        0.00058
         584371.38    4131186.65        0.00052                          584391.38
4131186.65        0.00047
         584411.38    4131186.65        0.00042                          584431.38
4131186.65        0.00038
         584451.38    4131186.65        0.00035                          584471.38
4131186.65        0.00032
         584491.38    4131186.65        0.00030                          584511.38
4131186.65        0.00027
         584231.38    4131206.65        0.00140                          584251.38
```

```
4131206.65        0.00116
         584271.38    4131206.65        0.00098                             584291.38
4131206.65        0.00083
         584311.38    4131206.65        0.00072                             584331.38
4131206.65        0.00063
         584351.38    4131206.65        0.00056                             584371.38
4131206.65        0.00050
         584391.38    4131206.65        0.00045                             584411.38
4131206.65        0.00041
         584431.38    4131206.65        0.00037                             584451.38
4131206.65        0.00034
         584471.38    4131206.65        0.00031                             584491.38
4131206.65        0.00029
         584211.38    4131226.65        0.00177                             584231.38
4131226.65        0.00133
         584251.38    4131226.65        0.00111                             584271.38
4131226.65        0.00094
         584291.38    4131226.65        0.00080                             584311.38
4131226.65        0.00070
         584331.38    4131226.65        0.00061                             584351.38
4131226.65        0.00054
         584371.38    4131226.65        0.00049                             584391.38
4131226.65        0.00044
         584411.38    4131226.65        0.00040                             584431.38
4131226.65        0.00036
         584451.38    4131226.65        0.00033                             584471.38
4131226.65        0.00030
         584491.38    4131226.65        0.00028                             584211.38
4131246.65        0.00168
         584231.38    4131246.65        0.00127                             584251.38
4131246.65        0.00106
         584271.38    4131246.65        0.00090                             584291.38
4131246.65        0.00077
         584311.38    4131246.65        0.00067                             584331.38
4131246.65        0.00059
         584351.38    4131246.65        0.00053                             584371.38
4131246.65        0.00047
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
```

```
                               Westport_SR-85_PM.ADO
                                  INCLUDING SOURCE(S):     L0001601    , L0001602
 , L0001603    , L0001604    , L0001605    ,
               L0001606    , L0001607    , L0001608    , L0001609    , L0001610
 , L0001611    , L0001612    , L0001613    ,
               L0001614    , L0001615    , L0001616    , L0001617    , L0001618
 , L0001619    , L0001620    , L0001621    ,
               L0001622    , L0001623    , L0001624    , L0001625    , L0001626
 , L0001627    , L0001628    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                     **

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
         584391.38    4131246.65        0.00043                      584411.38
4131246.65        0.00039
         584431.38    4131246.65        0.00035                      584451.38
4131246.65        0.00032
         584471.38    4131246.65        0.00030                      584211.38
4131266.65        0.00158
         584231.38    4131266.65        0.00120                      584251.38
4131266.65        0.00101
         584271.38    4131266.65        0.00087                      584291.38
4131266.65        0.00075
         584211.38    4131286.65        0.00147                      584231.38
4131286.65        0.00113
         584251.38    4131286.65        0.00096                      584211.38
4131306.65        0.00133
         584231.38    4131306.65        0.00110                      584191.38
4131326.65        0.00174
         584211.38    4131326.65        0.00126                      584191.38
4131346.65        0.00162
         584171.38    4131366.65        0.00202                      584191.38
4131366.65        0.00142
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

```
                                  *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0001601    , L0001602
 , L0001603    , L0001604    , L0001605    ,
                L0001606    , L0001607    , L0001608    , L0001609    , L0001610
 , L0001611    , L0001612    , L0001613    ,
                L0001614    , L0001615    , L0001616    , L0001617    , L0001618
 , L0001619    , L0001620    , L0001621    ,
                L0001622    , L0001623    , L0001624    , L0001625    , L0001626
 , L0001627    , L0001628    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                     **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584291.38   4131146.65        0.00412  (09022019)                584311.38
 4131146.65        0.00372  (13122718)
        584331.38   4131146.65        0.00338  (11011719)                584351.38
 4131146.65        0.00309  (11020602)
        584371.38   4131146.65        0.00287  (11020602)                584391.38
 4131146.65        0.00266  (11020602)
        584411.38   4131146.65        0.00248  (11020602)                584431.38
 4131146.65        0.00232  (09012018)
        584451.38   4131146.65        0.00218  (11011718)                584471.38
 4131146.65        0.00206  (11011718)
        584491.38   4131146.65        0.00196  (11020520)                584511.38
 4131146.65        0.00186  (11020520)
        584231.38   4131166.65        0.00619  (13021720)                584251.38
 4131166.65        0.00521  (09022019)
        584271.38   4131166.65        0.00459  (09022019)                584291.38
 4131166.65        0.00405  (13122718)
        584311.38   4131166.65        0.00365  (11011719)                584331.38
 4131166.65        0.00331  (11011719)
        584351.38   4131166.65        0.00305  (11020602)                584371.38
 4131166.65        0.00282  (11020602)
        584391.38   4131166.65        0.00262  (11020602)                584411.38
 4131166.65        0.00244  (09012018)
        584431.38   4131166.65        0.00229  (11011718)                584451.38
 4131166.65        0.00215  (11011718)
        584471.38   4131166.65        0.00204  (11020520)                584491.38
 4131166.65        0.00194  (11020520)
        584511.38   4131166.65        0.00185  (11020520)                584231.38
```

```
4131186.65         0.00601  (09022019)
        584251.38   4131186.65         0.00513  (09022019)                  584271.38
4131186.65         0.00445  (09022019)
        584291.38   4131186.65         0.00396  (11011719)                  584311.38
4131186.65         0.00357  (11011719)
        584331.38   4131186.65         0.00325  (11020602)                  584351.38
4131186.65         0.00300  (11020602)
        584371.38   4131186.65         0.00277  (11020602)                  584391.38
4131186.65         0.00257  (09012018)
        584411.38   4131186.65         0.00240  (11011718)                  584431.38
4131186.65         0.00225  (11011718)
        584451.38   4131186.65         0.00212  (11020520)                  584471.38
4131186.65         0.00202  (11020520)
        584491.38   4131186.65         0.00192  (11020520)                  584511.38
4131186.65         0.00182  (11020520)
        584231.38   4131206.65         0.00553  (09022019)                  584251.38
4131206.65         0.00497  (09022019)
        584271.38   4131206.65         0.00434  (13122718)                  584291.38
4131206.65         0.00388  (11011719)
        584311.38   4131206.65         0.00348  (11020602)                  584331.38
4131206.65         0.00320  (11020602)
        584351.38   4131206.65         0.00294  (11020602)                  584371.38
4131206.65         0.00271  (11020602)
        584391.38   4131206.65         0.00253  (11011718)                  584411.38
4131206.65         0.00236  (11011718)
        584431.38   4131206.65         0.00222  (11020520)                  584451.38
4131206.65         0.00210  (11020520)
        584471.38   4131206.65         0.00199  (11020520)                  584491.38
4131206.65         0.00189  (11020520)
        584211.38   4131226.65         0.00677  (13021518)                  584231.38
4131226.65         0.00519  (09022019)
        584251.38   4131226.65         0.00477  (09022019)                  584271.38
4131226.65         0.00424  (11011719)
        584291.38   4131226.65         0.00378  (11011719)                  584311.38
4131226.65         0.00343  (11020602)
        584331.38   4131226.65         0.00314  (11020602)                  584351.38
4131226.65         0.00288  (11020602)
        584371.38   4131226.65         0.00267  (11011718)                  584391.38
4131226.65         0.00249  (11011718)
        584411.38   4131226.65         0.00232  (11020520)                  584431.38
4131226.65         0.00220  (11020520)
        584451.38   4131226.65         0.00208  (11020520)                  584471.38
4131226.65         0.00196  (11020520)
        584491.38   4131226.65         0.00186  (11020520)                  584211.38
4131246.65         0.00654  (09022019)
        584231.38   4131246.65         0.00509  (09022019)                  584251.38
4131246.65         0.00463  (13122718)
        584271.38   4131246.65         0.00413  (11011719)                  584291.38
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 4131246.65        0.00370  (11020602)
       584311.38   4131246.65        0.00337  (11020602)                584331.38
 4131246.65        0.00307  (11020602)
       584351.38   4131246.65        0.00283  (11011718)                584371.38
 4131246.65        0.00262  (11011718)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                       ***        14:27:24

                                  PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                             *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0001601    , L0001602
 , L0001603    , L0001604    , L0001605    ,
                 L0001606    , L0001607    , L0001608    , L0001609    , L0001610
 , L0001611    , L0001612    , L0001613    ,
                 L0001614    , L0001615    , L0001616    , L0001617    , L0001618
 , L0001619    , L0001620    , L0001621    ,
                 L0001622    , L0001623    , L0001624    , L0001625    , L0001626
 , L0001627    , L0001628    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584391.38   4131246.65        0.00244  (11020520)                584411.38
 4131246.65        0.00230  (11020520)
       584431.38   4131246.65        0.00217  (11020520)                584451.38
 4131246.65        0.00204  (11020520)
       584471.38   4131246.65        0.00193  (11020520)                584211.38
 4131266.65        0.00628  (09022019)
       584231.38   4131266.65        0.00490  (09022019)                584251.38
 4131266.65        0.00450  (11011719)
       584271.38   4131266.65        0.00402  (11011719)                584291.38
 4131266.65        0.00363  (11020602)
       584211.38   4131286.65        0.00597  (09022019)                584231.38
 4131286.65        0.00485  (13122718)
       584251.38   4131286.65        0.00435  (11011719)                584211.38
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 4131306.65        0.00570  (11091922)
       584231.38   4131306.65        0.00481  (11011719)                584191.38
 4131326.65        0.00676  (09022019)
       584211.38   4131326.65        0.00557  (11020621)                584191.38
 4131346.65        0.00642  (13122718)
       584171.38   4131366.65        0.00759  (09022019)                584191.38
 4131366.65        0.00673  (10021722)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001601    , L0001602
 , L0001603    , L0001604    , L0001605    ,
                  L0001606    , L0001607    , L0001608    , L0001609    , L0001610
 , L0001611    , L0001612    , L0001613    ,
                  L0001614    , L0001615    , L0001616    , L0001617    , L0001618
 , L0001619    , L0001620    , L0001621    ,
                  L0001622    , L0001623    , L0001624    , L0001625    , L0001626
 , L0001627    , L0001628    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584291.38   4131146.65        0.00192c (09010824)                584311.38
 4131146.65        0.00168c (09010824)
       584331.38   4131146.65        0.00151c (09010824)                584351.38
 4131146.65        0.00136c (09010824)
       584371.38   4131146.65        0.00124c (09010824)                584391.38
 4131146.65        0.00113c (09010824)
       584411.38   4131146.65        0.00104c (09010824)                584431.38
 4131146.65        0.00095c (09010824)
       584451.38   4131146.65        0.00088c (09010824)                584471.38
 4131146.65        0.00081c (09010824)
       584491.38   4131146.65        0.00076c (09010824)                584511.38
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4131146.65        0.00070c (09010824)
       584231.38   4131166.65        0.00297c (09010824)                584251.38
4131166.65        0.00258b (09112324)
       584271.38   4131166.65        0.00212c (09010824)                584291.38
4131166.65        0.00186c (09010824)
       584311.38   4131166.65        0.00164c (09010824)                584331.38
4131166.65        0.00147c (09010824)
       584351.38   4131166.65        0.00133c (09010824)                584371.38
4131166.65        0.00121c (09010824)
       584391.38   4131166.65        0.00111c (09010824)                584411.38
4131166.65        0.00101c (09010824)
       584431.38   4131166.65        0.00093c (09010824)                584451.38
4131166.65        0.00086c (09010824)
       584471.38   4131166.65        0.00080c (09010824)                584491.38
4131166.65        0.00074c (09010824)
       584511.38   4131166.65        0.00068c (09010824)                584231.38
4131186.65        0.00287c (09010824)
       584251.38   4131186.65        0.00240c (09010824)                584271.38
4131186.65        0.00206c (09010824)
       584291.38   4131186.65        0.00181c (09010824)                584311.38
4131186.65        0.00161c (09010824)
       584331.38   4131186.65        0.00144c (09010824)                584351.38
4131186.65        0.00130c (09010824)
       584371.38   4131186.65        0.00118c (09010824)                584391.38
4131186.65        0.00108c (09010824)
       584411.38   4131186.65        0.00099c (09010824)                584431.38
4131186.65        0.00091c (09010824)
       584451.38   4131186.65        0.00084c (09010824)                584471.38
4131186.65        0.00078c (09010824)
       584491.38   4131186.65        0.00072c (09010824)                584511.38
4131186.65        0.00066c (09010824)
       584231.38   4131206.65        0.00303b (09112324)                584251.38
4131206.65        0.00232c (09010824)
       584271.38   4131206.65        0.00201c (09010824)                584291.38
4131206.65        0.00176c (09010824)
       584311.38   4131206.65        0.00157c (09010824)                584331.38
4131206.65        0.00141c (09010824)
       584351.38   4131206.65        0.00127c (09010824)                584371.38
4131206.65        0.00115c (09010824)
       584391.38   4131206.65        0.00105c (09010824)                584411.38
4131206.65        0.00097c (09010824)
       584431.38   4131206.65        0.00089c (09010824)                584451.38
4131206.65        0.00082c (09010824)
       584471.38   4131206.65        0.00075c (09010824)                584491.38
4131206.65        0.00070c (09010824)
       584211.38   4131226.65        0.00329c (09010824)                584231.38
4131226.65        0.00311b (09112324)
       584251.38   4131226.65        0.00222c (09010824)                584271.38
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 4131226.65        0.00195c (09010824)
        584291.38   4131226.65        0.00172c (09010824)                584311.38
 4131226.65        0.00153c (09010824)
        584331.38   4131226.65        0.00137c (09010824)                584351.38
 4131226.65        0.00124c (09010824)
        584371.38   4131226.65        0.00113c (09010824)                584391.38
 4131226.65        0.00103c (09010824)
        584411.38   4131226.65        0.00094c (09010824)                584431.38
 4131226.65        0.00086c (09010824)
        584451.38   4131226.65        0.00079c (09010824)                584471.38
 4131226.65        0.00073c (09010824)
        584491.38   4131226.65        0.00068b (13120324)                584211.38
 4131246.65        0.00316c (09010824)
        584231.38   4131246.65        0.00293b (09112324)                584251.38
 4131246.65        0.00215c (09010824)
        584271.38   4131246.65        0.00189c (09010824)                584291.38
 4131246.65        0.00167c (09010824)
        584311.38   4131246.65        0.00149c (09010824)                584331.38
 4131246.65        0.00134c (09010824)
        584351.38   4131246.65        0.00121c (09010824)                584371.38
 4131246.65        0.00110c (09010824)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL       ***
                                  INCLUDING SOURCE(S):     L0001601    , L0001602
 , L0001603    , L0001604    , L0001605    ,
                 L0001606    , L0001607    , L0001608    , L0001609    , L0001610
 , L0001611    , L0001612    , L0001613    ,
                 L0001614    , L0001615    , L0001616    , L0001617    , L0001618
 , L0001619    , L0001620    , L0001621    ,
                 L0001622    , L0001623    , L0001624    , L0001625    , L0001626
 , L0001627    , L0001628    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
```

```
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584391.38   4131246.65       0.00100c (09010824)                584411.38
 4131246.65       0.00091c (09010824)
        584431.38   4131246.65       0.00084c (09010824)                584451.38
 4131246.65       0.00077c (09010824)
        584471.38   4131246.65       0.00071b (13120324)                584211.38
 4131266.65       0.00301c (09010824)
        584231.38   4131266.65       0.00279b (09112324)                584251.38
 4131266.65       0.00209c (09010824)
        584271.38   4131266.65       0.00184c (09010824)                584291.38
 4131266.65       0.00162c (09010824)
        584211.38   4131286.65       0.00286c (09010824)                584231.38
 4131286.65       0.00244b (09112324)
        584251.38   4131286.65       0.00201c (09010824)                584211.38
 4131306.65       0.00266b (09112324)
        584231.38   4131306.65       0.00226c (09010824)                584191.38
 4131326.65       0.00331c (09010824)
        584211.38   4131326.65       0.00254c (09010824)                584191.38
 4131346.65       0.00314c (09010824)
        584171.38   4131366.65       0.00378c (09010824)                584191.38
 4131366.65       0.00287c (09010824)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***



                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
                **



                         NETWORK
GROUP ID                       AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -


ALL       1ST HIGHEST VALUE IS       0.00202 AT (  584171.38,  4131366.65,
91.85,    93.20,    0.00)  DC
```

```
          2ND HIGHEST VALUE IS       0.00177 AT (  584211.38,  4131226.65,
89.90,    92.59,    0.00)  DC
          3RD HIGHEST VALUE IS       0.00174 AT (  584191.38,  4131326.65,
89.79,    92.75,    0.00)  DC
          4TH HIGHEST VALUE IS       0.00168 AT (  584211.38,  4131246.65,
89.65,    92.53,    0.00)  DC
          5TH HIGHEST VALUE IS       0.00162 AT (  584191.38,  4131346.65,
91.03,    91.03,    0.00)  DC
          6TH HIGHEST VALUE IS       0.00158 AT (  584231.38,  4131166.65,
91.39,    91.39,    0.00)  DC
          7TH HIGHEST VALUE IS       0.00158 AT (  584211.38,  4131266.65,
90.78,    92.76,    0.00)  DC
          8TH HIGHEST VALUE IS       0.00151 AT (  584231.38,  4131186.65,
91.07,    91.07,    0.00)  DC
          9TH HIGHEST VALUE IS       0.00147 AT (  584211.38,  4131286.65,
91.79,    91.79,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00142 AT (  584191.38,  4131366.65,
92.99,    92.99,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                ***  THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
                **


                                                          DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.00759  ON 09022019: AT (  584171.38,
```

```
4131366.65,    91.85,    93.20,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
                **

                                                      DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.00378c ON 09010824: AT (  584171.38,
4131366.65,    91.85,    93.20,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:27:24

                                   PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

 *** Message Summary : AERMOD Model Execution ***
```

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 --------- Summary of Total Messages --------

A Total of             0 Fatal Error Message(s)
A Total of            95 Warning Message(s)
A Total of         15496 Informational Message(s)

A Total of         43872 Hours Were Processed

A Total of         14061 Calm Hours Identified

A Total of          1435 Missing Hours Identified (  3.27 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     571         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     572         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     573         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     574         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     575         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     576         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     577         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     578         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     579         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     580         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     581         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     582         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     583         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     584         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     585         VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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        QS
SO W320     586         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     587         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     588         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     589         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     590         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     591         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     592         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     593         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     594         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     595         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     596         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     597         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     598         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     599         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     600         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     601         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     602         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     603         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     604         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     605         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     606         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     607         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     608         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     609         VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320     610        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     611        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     612        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     613        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     614        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     615        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     616        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     617        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     620        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     621        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     622        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     623        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     624        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     625        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     626        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     627        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     628        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     629        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     630        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     631        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     632        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     633        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     634        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     635        VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320     636        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     637        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     638        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     639        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     640        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     641        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     642        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     643        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     644        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     645        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     646        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     647        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     648        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     649        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     650        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     651        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     652        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     653        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     654        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     655        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     656        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     657        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     658        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     659        VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320     660        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     661        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     662        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     663        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     664        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     665        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     666        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
MX W481   43873         MAIN: Data Remaining After End of Year. Number of Hours=
       48

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/22/2018
** File:
C:\Users\ace.malisos\Desktop\Westport\Westport_SR-85_PM2\Westport_SR-85_PM2.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_2.5
   RUNORNOT RUN
   ERRORFIL Westport_SR-85_PM2.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.001302
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
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** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001876     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001903     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001904     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
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LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001947     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
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   LOCATION L0001965     VOLUME   584004.604 4131719.942 92.58
   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.001302
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
** 583972.941, 4131730.297, 92.00, 4.15, 5.58
** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
** ------------------------------------------------------------------------
   LOCATION L0001967     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
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LOCATION L0001992     VOLUME   584089.956 4131450.711 89.21
LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002012     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002024     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002026     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
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   LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
** --------------------------------------------------------------------
   LOCATION L0001782     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0001783     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0001784     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0001785     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0001786     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0001787     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0001788     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0001789     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0001790     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0001791     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0001792     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0001793     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0001794     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0001795     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0001796     VOLUME   584367.886 4131105.823 91.93
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   LOCATION L0001797     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0001798     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0001799     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0001800     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0001801     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0001802     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0001803     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0001804     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0001805     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0001806     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0001807     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0001808     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0001809     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0001810     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0001811     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0001812     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0001813     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0001814     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0001815     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0001816     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0001817     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0001818     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0001819     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0001820     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0001821     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0001822     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0001823     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0001824     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0001825     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0001826     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0001827     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0001828     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0001829     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0001830     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0001831     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0001832     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0001833     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0001834     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0001835     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0001836     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0001837     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0001838     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0001839     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0001840     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0001841     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0001842     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0001843     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0001844     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0001845     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0001846     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0001847     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0001848     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0001849     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0001850     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0001851     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0001852     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0001853     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0001854     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0001855     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0001856     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0001857     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0001858     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0001859     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0001860     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0001861     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0001862     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0001863     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0001864     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0001865     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0001866     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0001867     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0001868     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0001869     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0001870     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0001871     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0001872     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0001873     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0001874     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0001875     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
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** Source Parameters **
** LINE VOLUME Source ID = SLINE1
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   SRCPARAM L0001877     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001878     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001879     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001880     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001881     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001882     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001883     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001884     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001885     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001886     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001887     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001888     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001889     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001890     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001891     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001892     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001893     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001894     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001895     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001896     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001897     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001898     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001899     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001900     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001901     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001902     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001903     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001904     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001905     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001906     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001907     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001908     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001909     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001910     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001911     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001912     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001913     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001914     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001915     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001916     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001917     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001918     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001919     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001920     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001921     0.0000143077      4.15       5.58       2.93
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   SRCPARAM L0001922     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001923     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001924     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001925     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001926     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001927     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001928     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001929     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001930     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001931     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001932     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001933     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001934     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001935     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001936     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001937     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001938     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001939     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001940     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001941     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001942     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001943     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001944     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001945     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001946     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001947     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001948     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001949     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001950     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001951     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001952     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001953     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001954     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001955     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001956     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001957     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001958     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001959     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001960     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001961     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001962     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001963     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001964     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001965     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001966     0.0000143077      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001967     0.0000144667      4.15      5.58      3.21
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SRCPARAM L0001968     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001969     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001970     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001971     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001972     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001973     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001974     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001975     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001976     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001977     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001978     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001979     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001980     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001981     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001982     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001983     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001984     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001985     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001986     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001987     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001988     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001989     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001990     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001991     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001992     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001993     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001994     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001995     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001996     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001997     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001998     0.0000144667      4.15       5.58       3.21
SRCPARAM L0001999     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002000     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002001     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002002     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002003     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002004     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002005     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002006     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002007     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002008     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002009     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002010     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002011     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002012     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002013     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002014     0.0000144667      4.15       5.58       3.21
SRCPARAM L0002015     0.0000144667      4.15       5.58       3.21
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   SRCPARAM L0002016     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002017     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002018     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002019     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002020     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002021     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002022     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002023     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002024     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002025     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002026     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002027     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002028     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002029     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002030     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002031     0.0000144667      4.15      5.58      3.21
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   SRCPARAM L0002033     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002034     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002035     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002036     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002037     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002038     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002039     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002040     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002041     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002042     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002043     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002044     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002045     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002046     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002047     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002048     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002049     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002050     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002051     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002052     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002053     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002054     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002055     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002056     0.0000144667      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
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   SRCPARAM L0001783           0.0      0.60      5.58      3.21
   SRCPARAM L0001784           0.0      0.60      5.58      3.21
   SRCPARAM L0001785           0.0      0.60      5.58      3.21
   SRCPARAM L0001786           0.0      0.60      5.58      3.21
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   SRCPARAM L0001789          0.0      0.60      5.58      3.21
   SRCPARAM L0001790          0.0      0.60      5.58      3.21
   SRCPARAM L0001791          0.0      0.60      5.58      3.21
   SRCPARAM L0001792          0.0      0.60      5.58      3.21
   SRCPARAM L0001793          0.0      0.60      5.58      3.21
   SRCPARAM L0001794          0.0      0.60      5.58      3.21
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   SRCPARAM L0001796          0.0      0.60      5.58      3.21
   SRCPARAM L0001797          0.0      0.60      5.58      3.21
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   SRCPARAM L0001799          0.0      0.60      5.58      3.21
   SRCPARAM L0001800          0.0      0.60      5.58      3.21
   SRCPARAM L0001801          0.0      0.60      5.58      3.21
   SRCPARAM L0001802          0.0      0.60      5.58      3.21
   SRCPARAM L0001803          0.0      0.60      5.58      3.21
   SRCPARAM L0001804          0.0      0.60      5.58      3.21
   SRCPARAM L0001805          0.0      0.60      5.58      3.21
   SRCPARAM L0001806          0.0      0.60      5.58      3.21
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   SRCPARAM L0001808          0.0      0.60      5.58      3.21
   SRCPARAM L0001809          0.0      0.60      5.58      3.21
   SRCPARAM L0001810          0.0      0.60      5.58      3.21
   SRCPARAM L0001811          0.0      0.60      5.58      3.21
   SRCPARAM L0001812          0.0      0.60      5.58      3.21
   SRCPARAM L0001813          0.0      0.60      5.58      3.21
   SRCPARAM L0001814          0.0      0.60      5.58      3.21
   SRCPARAM L0001815          0.0      0.60      5.58      3.21
   SRCPARAM L0001816          0.0      0.60      5.58      3.21
   SRCPARAM L0001817          0.0      0.60      5.58      3.21
   SRCPARAM L0001818          0.0      0.60      5.58      3.21
   SRCPARAM L0001819          0.0      0.60      5.58      3.21
   SRCPARAM L0001820          0.0      0.60      5.58      3.21
   SRCPARAM L0001821          0.0      0.60      5.58      3.21
   SRCPARAM L0001822          0.0      0.60      5.58      3.21
   SRCPARAM L0001823          0.0      0.60      5.58      3.21
   SRCPARAM L0001824          0.0      0.60      5.58      3.21
   SRCPARAM L0001825          0.0      0.60      5.58      3.21
   SRCPARAM L0001826          0.0      0.60      5.58      3.21
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** LINE VOLUME Source ID = SLINE4
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   SRCPARAM L0001830          0.0      0.60      5.58      3.21
   SRCPARAM L0001831          0.0      0.60      5.58      3.21
   SRCPARAM L0001832          0.0      0.60      5.58      3.21
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   SRCPARAM L0001835           0.0      0.60      5.58      3.21
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   SRCPARAM L0001838           0.0      0.60      5.58      3.21
   SRCPARAM L0001839           0.0      0.60      5.58      3.21
   SRCPARAM L0001840           0.0      0.60      5.58      3.21
   SRCPARAM L0001841           0.0      0.60      5.58      3.21
   SRCPARAM L0001842           0.0      0.60      5.58      3.21
   SRCPARAM L0001843           0.0      0.60      5.58      3.21
   SRCPARAM L0001844           0.0      0.60      5.58      3.21
   SRCPARAM L0001845           0.0      0.60      5.58      3.21
   SRCPARAM L0001846           0.0      0.60      5.58      3.21
   SRCPARAM L0001847           0.0      0.60      5.58      3.21
   SRCPARAM L0001848           0.0      0.60      5.58      3.21
   SRCPARAM L0001849           0.0      0.60      5.58      3.21
   SRCPARAM L0001850           0.0      0.60      5.58      3.21
   SRCPARAM L0001851           0.0      0.60      5.58      3.21
   SRCPARAM L0001852           0.0      0.60      5.58      3.21
   SRCPARAM L0001853           0.0      0.60      5.58      3.21
   SRCPARAM L0001854           0.0      0.60      5.58      3.21
   SRCPARAM L0001855           0.0      0.60      5.58      3.21
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   SRCPARAM L0001857           0.0      0.60      5.58      3.21
   SRCPARAM L0001858           0.0      0.60      5.58      3.21
   SRCPARAM L0001859           0.0      0.60      5.58      3.21
   SRCPARAM L0001860           0.0      0.60      5.58      3.21
   SRCPARAM L0001861           0.0      0.60      5.58      3.21
   SRCPARAM L0001862           0.0      0.60      5.58      3.21
   SRCPARAM L0001863           0.0      0.60      5.58      3.21
   SRCPARAM L0001864           0.0      0.60      5.58      3.21
   SRCPARAM L0001865           0.0      0.60      5.58      3.21
   SRCPARAM L0001866           0.0      0.60      5.58      3.21
   SRCPARAM L0001867           0.0      0.60      5.58      3.21
   SRCPARAM L0001868           0.0      0.60      5.58      3.21
   SRCPARAM L0001869           0.0      0.60      5.58      3.21
   SRCPARAM L0001870           0.0      0.60      5.58      3.21
   SRCPARAM L0001871           0.0      0.60      5.58      3.21
   SRCPARAM L0001872           0.0      0.60      5.58      3.21
   SRCPARAM L0001873           0.0      0.60      5.58      3.21
   SRCPARAM L0001874           0.0      0.60      5.58      3.21
   SRCPARAM L0001875           0.0      0.60      5.58      3.21
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   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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**
RE STARTING
   INCLUDED Westport_SR-85_PM2.rou
RE FINISHED
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** AERMOD Meteorology Pathway
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**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
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** AERMOD Output Pathway
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OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_SR-85_PM2.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_SR-85_PM2.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_SR-85_PM2.AD\AN00GALL.PLT 33
   SUMMFILE Westport_SR-85_PM2.sum
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
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**

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** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/22/2018
** File:
C:\Users\ace.malisos\Desktop\Westport\Westport_SR-85_PM2\Westport_SR-85_PM2.ADI
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** AERMOD Control Pathway
****************************************
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CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_2.5
   RUNORNOT RUN
   ERRORFIL Westport_SR-85_PM2.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ---------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.001302
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
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** 584214.591, 4130961.572, 89.16, 4.15, 5.58
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** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
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   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
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   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
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   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
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LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
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LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
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   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.001302
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
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   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
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   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
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LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
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LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
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LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
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LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
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LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
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LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
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   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0001783     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0001784     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0001785     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0001786     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0001787     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0001788     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0001789     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0001790     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0001791     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0001792     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0001793     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0001794     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0001795     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0001796     VOLUME   584367.886 4131105.823 91.93
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   LOCATION L0001797     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0001798     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0001799     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0001800     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0001801     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0001802     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0001803     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0001804     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0001805     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0001806     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0001807     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0001808     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0001809     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0001810     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0001811     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0001812     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0001813     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0001814     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0001815     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0001816     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0001817     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0001818     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0001819     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0001820     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0001821     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0001822     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0001823     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0001824     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0001825     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0001826     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0001827     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0001828     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
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** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0001830     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0001831     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0001832     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0001833     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0001834     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0001835     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0001836     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0001837     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0001838     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0001839     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0001840     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0001841     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0001842     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0001843     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0001844     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0001845     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0001846     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0001847     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0001848     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0001849     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0001850     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0001851     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0001852     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0001853     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0001854     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0001855     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0001856     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0001857     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0001858     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0001859     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0001860     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0001861     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0001862     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0001863     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0001864     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0001865     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0001866     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0001867     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0001868     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0001869     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0001870     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0001871     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0001872     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0001873     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0001874     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0001875     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
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   SRCPARAM L0001877     0.0000143077      4.15       5.58       2.93
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   SRCPARAM L0001879     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001880     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001881     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001882     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001883     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001884     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001885     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001886     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001887     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001888     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001889     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001890     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001891     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001892     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001893     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001894     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001895     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001896     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001897     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001898     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001899     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001900     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001901     0.0000143077      4.15       5.58       2.93
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   SRCPARAM L0001903     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001904     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001905     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001906     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001907     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001908     0.0000143077      4.15       5.58       2.93
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   SRCPARAM L0001910     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001911     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001912     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001913     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001914     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001915     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001916     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001917     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001918     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001919     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001920     0.0000143077      4.15       5.58       2.93
   SRCPARAM L0001921     0.0000143077      4.15       5.58       2.93
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   SRCPARAM L0001922     0.0000143077      4.15      5.58      2.93
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   SRCPARAM L0001924     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001925     0.0000143077      4.15      5.58      2.93
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   SRCPARAM L0001927     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001928     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001929     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001930     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001931     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001932     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001933     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001934     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001935     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001936     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001937     0.0000143077      4.15      5.58      2.93
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   SRCPARAM L0001939     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001940     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001941     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001942     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001943     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001944     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001945     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001946     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001947     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001948     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001949     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001950     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001951     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001952     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001953     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001954     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001955     0.0000143077      4.15      5.58      2.93
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   SRCPARAM L0001957     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001958     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001959     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001960     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001961     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001962     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001963     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001964     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001965     0.0000143077      4.15      5.58      2.93
   SRCPARAM L0001966     0.0000143077      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
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SRCPARAM L0001971     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001972     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001973     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001974     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001975     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001976     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001977     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001978     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001979     0.0000144667       4.15       5.58       3.21
SRCPARAM L0001980     0.0000144667       4.15       5.58       3.21
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SRCPARAM L0001982     0.0000144667       4.15       5.58       3.21
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SRCPARAM L0001997     0.0000144667       4.15       5.58       3.21
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SRCPARAM L0002015     0.0000144667       4.15       5.58       3.21
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   SRCPARAM L0002028     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002029     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002030     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002031     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002032     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002033     0.0000144667      4.15      5.58      3.21
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   SRCPARAM L0002036     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002037     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002038     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002039     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002040     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002041     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002042     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002043     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002044     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002045     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002046     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002047     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002048     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002049     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002050     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002051     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002052     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002053     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002054     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002055     0.0000144667      4.15      5.58      3.21
   SRCPARAM L0002056     0.0000144667      4.15      5.58      3.21
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0001782            0.0      0.60      5.58      3.21
   SRCPARAM L0001783            0.0      0.60      5.58      3.21
   SRCPARAM L0001784            0.0      0.60      5.58      3.21
   SRCPARAM L0001785            0.0      0.60      5.58      3.21
   SRCPARAM L0001786            0.0      0.60      5.58      3.21
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   SRCPARAM L0001787           0.0      0.60      5.58      3.21
   SRCPARAM L0001788           0.0      0.60      5.58      3.21
   SRCPARAM L0001789           0.0      0.60      5.58      3.21
   SRCPARAM L0001790           0.0      0.60      5.58      3.21
   SRCPARAM L0001791           0.0      0.60      5.58      3.21
   SRCPARAM L0001792           0.0      0.60      5.58      3.21
   SRCPARAM L0001793           0.0      0.60      5.58      3.21
   SRCPARAM L0001794           0.0      0.60      5.58      3.21
   SRCPARAM L0001795           0.0      0.60      5.58      3.21
   SRCPARAM L0001796           0.0      0.60      5.58      3.21
   SRCPARAM L0001797           0.0      0.60      5.58      3.21
   SRCPARAM L0001798           0.0      0.60      5.58      3.21
   SRCPARAM L0001799           0.0      0.60      5.58      3.21
   SRCPARAM L0001800           0.0      0.60      5.58      3.21
   SRCPARAM L0001801           0.0      0.60      5.58      3.21
   SRCPARAM L0001802           0.0      0.60      5.58      3.21
   SRCPARAM L0001803           0.0      0.60      5.58      3.21
   SRCPARAM L0001804           0.0      0.60      5.58      3.21
   SRCPARAM L0001805           0.0      0.60      5.58      3.21
   SRCPARAM L0001806           0.0      0.60      5.58      3.21
   SRCPARAM L0001807           0.0      0.60      5.58      3.21
   SRCPARAM L0001808           0.0      0.60      5.58      3.21
   SRCPARAM L0001809           0.0      0.60      5.58      3.21
   SRCPARAM L0001810           0.0      0.60      5.58      3.21
   SRCPARAM L0001811           0.0      0.60      5.58      3.21
   SRCPARAM L0001812           0.0      0.60      5.58      3.21
   SRCPARAM L0001813           0.0      0.60      5.58      3.21
   SRCPARAM L0001814           0.0      0.60      5.58      3.21
   SRCPARAM L0001815           0.0      0.60      5.58      3.21
   SRCPARAM L0001816           0.0      0.60      5.58      3.21
   SRCPARAM L0001817           0.0      0.60      5.58      3.21
   SRCPARAM L0001818           0.0      0.60      5.58      3.21
   SRCPARAM L0001819           0.0      0.60      5.58      3.21
   SRCPARAM L0001820           0.0      0.60      5.58      3.21
   SRCPARAM L0001821           0.0      0.60      5.58      3.21
   SRCPARAM L0001822           0.0      0.60      5.58      3.21
   SRCPARAM L0001823           0.0      0.60      5.58      3.21
   SRCPARAM L0001824           0.0      0.60      5.58      3.21
   SRCPARAM L0001825           0.0      0.60      5.58      3.21
   SRCPARAM L0001826           0.0      0.60      5.58      3.21
   SRCPARAM L0001827           0.0      0.60      5.58      3.21
   SRCPARAM L0001828           0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0001829           0.0      0.60      5.58      3.21
   SRCPARAM L0001830           0.0      0.60      5.58      3.21
   SRCPARAM L0001831           0.0      0.60      5.58      3.21
   SRCPARAM L0001832           0.0      0.60      5.58      3.21
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   SRCPARAM L0001833           0.0      0.60      5.58      3.21
   SRCPARAM L0001834           0.0      0.60      5.58      3.21
   SRCPARAM L0001835           0.0      0.60      5.58      3.21
   SRCPARAM L0001836           0.0      0.60      5.58      3.21
   SRCPARAM L0001837           0.0      0.60      5.58      3.21
   SRCPARAM L0001838           0.0      0.60      5.58      3.21
   SRCPARAM L0001839           0.0      0.60      5.58      3.21
   SRCPARAM L0001840           0.0      0.60      5.58      3.21
   SRCPARAM L0001841           0.0      0.60      5.58      3.21
   SRCPARAM L0001842           0.0      0.60      5.58      3.21
   SRCPARAM L0001843           0.0      0.60      5.58      3.21
   SRCPARAM L0001844           0.0      0.60      5.58      3.21
   SRCPARAM L0001845           0.0      0.60      5.58      3.21
   SRCPARAM L0001846           0.0      0.60      5.58      3.21
   SRCPARAM L0001847           0.0      0.60      5.58      3.21
   SRCPARAM L0001848           0.0      0.60      5.58      3.21
   SRCPARAM L0001849           0.0      0.60      5.58      3.21
   SRCPARAM L0001850           0.0      0.60      5.58      3.21
   SRCPARAM L0001851           0.0      0.60      5.58      3.21
   SRCPARAM L0001852           0.0      0.60      5.58      3.21
   SRCPARAM L0001853           0.0      0.60      5.58      3.21
   SRCPARAM L0001854           0.0      0.60      5.58      3.21
   SRCPARAM L0001855           0.0      0.60      5.58      3.21
   SRCPARAM L0001856           0.0      0.60      5.58      3.21
   SRCPARAM L0001857           0.0      0.60      5.58      3.21
   SRCPARAM L0001858           0.0      0.60      5.58      3.21
   SRCPARAM L0001859           0.0      0.60      5.58      3.21
   SRCPARAM L0001860           0.0      0.60      5.58      3.21
   SRCPARAM L0001861           0.0      0.60      5.58      3.21
   SRCPARAM L0001862           0.0      0.60      5.58      3.21
   SRCPARAM L0001863           0.0      0.60      5.58      3.21
   SRCPARAM L0001864           0.0      0.60      5.58      3.21
   SRCPARAM L0001865           0.0      0.60      5.58      3.21
   SRCPARAM L0001866           0.0      0.60      5.58      3.21
   SRCPARAM L0001867           0.0      0.60      5.58      3.21
   SRCPARAM L0001868           0.0      0.60      5.58      3.21
   SRCPARAM L0001869           0.0      0.60      5.58      3.21
   SRCPARAM L0001870           0.0      0.60      5.58      3.21
   SRCPARAM L0001871           0.0      0.60      5.58      3.21
   SRCPARAM L0001872           0.0      0.60      5.58      3.21
   SRCPARAM L0001873           0.0      0.60      5.58      3.21
   SRCPARAM L0001874           0.0      0.60      5.58      3.21
   SRCPARAM L0001875           0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
```

```
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED Westport_SR-85_PM2.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_SR-85_PM2.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_SR-85_PM2.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_SR-85_PM2.AD\AN00GALL.PLT 33
   SUMMFILE Westport_SR-85_PM2.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of          94 Warning Message(s)
 A Total of           0 Informational Message(s)
```

```
   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     571         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     572         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     573         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     574         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     575         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     576         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     577         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     578         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     579         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     580         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     581         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     582         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     583         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     584         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     585         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     586         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     587         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     588         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     589         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     590         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     591         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     592         VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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        QS
SO W320     593        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     594        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     595        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     596        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     597        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     598        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     599        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     600        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     601        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     602        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     603        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     604        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     605        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     606        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     607        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     608        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     609        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     610        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     611        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     612        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     613        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     614        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     615        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320     616        VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320     617         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     620         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     621         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     622         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     623         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     624         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     625         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     626         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     627         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     628         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     629         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     630         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     631         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     632         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     633         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     634         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     635         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     636         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     637         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     638         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     639         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     640         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     641         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     642         VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320      643         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      644         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      645         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      646         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      647         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      648         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      649         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      650         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      651         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      652         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      653         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      654         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      655         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      656         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      657         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      658         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      659         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      660         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      661         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      662         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      663         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      664         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      665         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320      666         VPARM: Input Parameter May Be Out-of-Range for Parameter
```

```
        QS

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                             ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   275 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   1918000.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_2.5
```

```
 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:    275 Source(s);       1 Source Group(s); and     100
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    275 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  14134

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    11.90 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Westport_SR-85_PM2.err
```

```
 **File for Summary of Results:   Westport_SR-85_PM2.sum

♀ *** AERMOD - VERSION  18081 ***   *** 
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***   
08/22/18
 *** AERMET - VERSION  14134 ***   ***                                                                                       
                        ***       20:34:19

                                  PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN 


                                                   *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.    
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY      
SZ     SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) 
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
- - - - - - - - - - - - - - - - - - - -

 L0001876         0   0.14308E-04  584315.9 4130704.1    92.2     4.15     5.58     
2.93     YES               
 L0001877         0   0.14308E-04  584311.5 4130715.3    92.0     4.15     5.58     
2.93     YES               
 L0001878         0   0.14308E-04  584307.1 4130726.5    91.5     4.15     5.58     
2.93     YES               
 L0001879         0   0.14308E-04  584302.7 4130737.6    91.4     4.15     5.58     
2.93     YES               
 L0001880         0   0.14308E-04  584298.3 4130748.8    91.4     4.15     5.58     
2.93     YES               
 L0001881         0   0.14308E-04  584293.9 4130760.0    91.9     4.15     5.58     
2.93     YES               
 L0001882         0   0.14308E-04  584289.5 4130771.1    91.9     4.15     5.58     
2.93     YES               
 L0001883         0   0.14308E-04  584285.1 4130782.3    91.4     4.15     5.58     
2.93     YES               
 L0001884         0   0.14308E-04  584280.7 4130793.5    91.0     4.15     5.58     
2.93     YES               
 L0001885         0   0.14308E-04  584276.3 4130804.6    90.9     4.15     5.58     
2.93     YES               
 L0001886         0   0.14308E-04  584271.9 4130815.8    90.8     4.15     5.58     
2.93     YES               
 L0001887         0   0.14308E-04  584267.5 4130827.0    90.7     4.15     5.58     
2.93     YES               
```

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 L0001888         0   0.14308E-04  584263.2 4130838.1    90.6      4.15      5.58
2.93     YES
 L0001889         0   0.14308E-04  584258.8 4130849.3    90.5      4.15      5.58
2.93     YES
 L0001890         0   0.14308E-04  584254.4 4130860.5    90.3      4.15      5.58
2.93     YES
 L0001891         0   0.14308E-04  584250.0 4130871.6    90.2      4.15      5.58
2.93     YES
 L0001892         0   0.14308E-04  584245.6 4130882.8    90.2      4.15      5.58
2.93     YES
 L0001893         0   0.14308E-04  584241.2 4130894.0    90.1      4.15      5.58
2.93     YES
 L0001894         0   0.14308E-04  584236.8 4130905.1    89.9      4.15      5.58
2.93     YES
 L0001895         0   0.14308E-04  584232.4 4130916.3    89.6      4.15      5.58
2.93     YES
 L0001896         0   0.14308E-04  584228.0 4130927.5    89.5      4.15      5.58
2.93     YES
 L0001897         0   0.14308E-04  584223.6 4130938.6    89.4      4.15      5.58
2.93     YES
 L0001898         0   0.14308E-04  584219.2 4130949.8    89.3      4.15      5.58
2.93     YES
 L0001899         0   0.14308E-04  584214.8 4130961.0    89.2      4.15      5.58
2.93     YES
 L0001900         0   0.14308E-04  584212.0 4130972.6    89.0      4.15      5.58
2.93     YES
 L0001901         0   0.14308E-04  584209.2 4130984.3    88.8      4.15      5.58
2.93     YES
 L0001902         0   0.14308E-04  584206.4 4130996.0    88.4      4.15      5.58
2.93     YES
 L0001903         0   0.14308E-04  584203.6 4131007.6    88.2      4.15      5.58
2.93     YES
 L0001904         0   0.14308E-04  584200.8 4131019.3    88.0      4.15      5.58
2.93     YES
 L0001905         0   0.14308E-04  584198.1 4131031.0    87.8      4.15      5.58
2.93     YES
 L0001906         0   0.14308E-04  584195.3 4131042.7    87.6      4.15      5.58
2.93     YES
 L0001907         0   0.14308E-04  584192.5 4131054.3    87.5      4.15      5.58
2.93     YES
 L0001908         0   0.14308E-04  584189.7 4131066.0    87.5      4.15      5.58
2.93     YES
 L0001909         0   0.14308E-04  584186.9 4131077.7    87.5      4.15      5.58
2.93     YES
 L0001910         0   0.14308E-04  584184.2 4131089.4    87.3      4.15      5.58
2.93     YES
 L0001911         0   0.14308E-04  584181.4 4131101.0    87.0      4.15      5.58
2.93     YES
```

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 L0001912         0   0.14308E-04  584178.6 4131112.7    86.9     4.15     5.58
2.93     YES
 L0001913         0   0.14308E-04  584176.3 4131124.5    86.8     4.15     5.58
2.93     YES
 L0001914         0   0.14308E-04  584174.0 4131136.3    86.8     4.15     5.58
2.93     YES
 L0001915         0   0.14308E-04  584171.8 4131148.0    86.7     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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 L0001916         0   0.14308E-04  584169.5 4131159.8    86.7     4.15     5.58
2.93     YES
 L0001917         0   0.14308E-04  584167.2 4131171.6    86.8     4.15     5.58
2.93     YES
 L0001918         0   0.14308E-04  584164.9 4131183.4    86.9     4.15     5.58
2.93     YES
 L0001919         0   0.14308E-04  584162.6 4131195.2    87.1     4.15     5.58
2.93     YES
 L0001920         0   0.14308E-04  584160.3 4131206.9    87.2     4.15     5.58
2.93     YES
 L0001921         0   0.14308E-04  584158.0 4131218.7    87.3     4.15     5.58
2.93     YES
 L0001922         0   0.14308E-04  584155.7 4131230.5    87.3     4.15     5.58
2.93     YES
 L0001923         0   0.14308E-04  584153.5 4131242.3    87.3     4.15     5.58
2.93     YES
 L0001924         0   0.14308E-04  584151.2 4131254.1    87.4     4.15     5.58
2.93     YES
 L0001925         0   0.14308E-04  584148.9 4131265.8    87.5     4.15     5.58
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2.93     YES
 L0001926         0   0.14308E-04  584146.6 4131277.6    87.6      4.15      5.58
2.93     YES
 L0001927         0   0.14308E-04  584144.3 4131289.4    87.8      4.15      5.58
2.93     YES
 L0001928         0   0.14308E-04  584142.0 4131301.2    87.9      4.15      5.58
2.93     YES
 L0001929         0   0.14308E-04  584139.7 4131313.0    88.1      4.15      5.58
2.93     YES
 L0001930         0   0.14308E-04  584137.4 4131324.7    88.4      4.15      5.58
2.93     YES
 L0001931         0   0.14308E-04  584135.1 4131336.5    88.6      4.15      5.58
2.93     YES
 L0001932         0   0.14308E-04  584132.9 4131348.3    88.7      4.15      5.58
2.93     YES
 L0001933         0   0.14308E-04  584130.6 4131360.1    88.8      4.15      5.58
2.93     YES
 L0001934         0   0.14308E-04  584128.3 4131371.9    88.9      4.15      5.58
2.93     YES
 L0001935         0   0.14308E-04  584126.0 4131383.6    89.0      4.15      5.58
2.93     YES
 L0001936         0   0.14308E-04  584123.7 4131395.4    89.2      4.15      5.58
2.93     YES
 L0001937         0   0.14308E-04  584121.4 4131407.2    89.4      4.15      5.58
2.93     YES
 L0001938         0   0.14308E-04  584119.1 4131419.0    89.6      4.15      5.58
2.93     YES
 L0001939         0   0.14308E-04  584116.8 4131430.8    89.8      4.15      5.58
2.93     YES
 L0001940         0   0.14308E-04  584114.6 4131442.5    90.0      4.15      5.58
2.93     YES
 L0001941         0   0.14308E-04  584112.3 4131454.3    90.1      4.15      5.58
2.93     YES
 L0001942         0   0.14308E-04  584109.3 4131465.9    90.2      4.15      5.58
2.93     YES
 L0001943         0   0.14308E-04  584105.6 4131477.3    90.3      4.15      5.58
2.93     YES
 L0001944         0   0.14308E-04  584101.9 4131488.8    90.4      4.15      5.58
2.93     YES
 L0001945         0   0.14308E-04  584098.2 4131500.2    90.5      4.15      5.58
2.93     YES
 L0001946         0   0.14308E-04  584094.6 4131511.6    90.6      4.15      5.58
2.93     YES
 L0001947         0   0.14308E-04  584090.9 4131523.0    90.7      4.15      5.58
2.93     YES
 L0001948         0   0.14308E-04  584087.2 4131534.5    90.9      4.15      5.58
2.93     YES
 L0001949         0   0.14308E-04  584083.5 4131545.9    91.0      4.15      5.58
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2.93     YES
 L0001950         0   0.14308E-04  584079.4 4131557.1    91.1     4.15     5.58
2.93     YES
 L0001951         0   0.14308E-04  584075.0 4131568.3    91.3     4.15     5.58
2.93     YES
 L0001952         0   0.14308E-04  584070.7 4131579.5    91.4     4.15     5.58
2.93     YES
 L0001953         0   0.14308E-04  584066.3 4131590.7    91.5     4.15     5.58
2.93     YES
 L0001954         0   0.14308E-04  584062.0 4131601.9    91.7     4.15     5.58
2.93     YES
 L0001955         0   0.14308E-04  584057.6 4131613.0    91.8     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                   BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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 L0001956         0   0.14308E-04  584053.3 4131624.2    92.0     4.15     5.58
2.93     YES
 L0001957         0   0.14308E-04  584048.9 4131635.4    92.0     4.15     5.58
2.93     YES
 L0001958         0   0.14308E-04  584044.6 4131646.6    92.1     4.15     5.58
2.93     YES
 L0001959         0   0.14308E-04  584040.2 4131657.8    92.2     4.15     5.58
2.93     YES
 L0001960         0   0.14308E-04  584035.9 4131669.0    92.4     4.15     5.58
2.93     YES
 L0001961         0   0.14308E-04  584031.2 4131680.0    92.4     4.15     5.58
2.93     YES
 L0001962         0   0.14308E-04  584024.6 4131690.0    92.5     4.15     5.58
2.93     YES
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 L0001963         0   0.14308E-04  584017.9 4131700.0    92.5      4.15      5.58
2.93     YES
 L0001964         0   0.14308E-04  584011.3 4131710.0    92.6      4.15      5.58
2.93     YES
 L0001965         0   0.14308E-04  584004.6 4131719.9    92.6      4.15      5.58
2.93     YES
 L0001966         0   0.14308E-04  583997.9 4131729.9    92.6      4.15      5.58
2.93     YES
 L0001967         0   0.14467E-04  583976.3 4131725.3    91.9      4.15      5.58
3.21     YES
 L0001968         0   0.14467E-04  583983.1 4131715.4    91.9      4.15      5.58
3.21     YES
 L0001969         0   0.14467E-04  583989.9 4131705.5    91.9      4.15      5.58
3.21     YES
 L0001970         0   0.14467E-04  583996.7 4131695.6    92.0      4.15      5.58
3.21     YES
 L0001971         0   0.14467E-04  584003.5 4131685.8    91.7      4.15      5.58
3.21     YES
 L0001972         0   0.14467E-04  584010.2 4131675.9    91.7      4.15      5.58
3.21     YES
 L0001973         0   0.14467E-04  584017.0 4131666.0    91.9      4.15      5.58
3.21     YES
 L0001974         0   0.14467E-04  584023.8 4131656.1    91.9      4.15      5.58
3.21     YES
 L0001975         0   0.14467E-04  584028.5 4131645.1    91.6      4.15      5.58
3.21     YES
 L0001976         0   0.14467E-04  584032.5 4131633.8    91.4      4.15      5.58
3.21     YES
 L0001977         0   0.14467E-04  584036.5 4131622.4    91.3      4.15      5.58
3.21     YES
 L0001978         0   0.14467E-04  584040.5 4131611.1    91.2      4.15      5.58
3.21     YES
 L0001979         0   0.14467E-04  584044.5 4131599.8    91.2      4.15      5.58
3.21     YES
 L0001980         0   0.14467E-04  584048.5 4131588.5    91.1      4.15      5.58
3.21     YES
 L0001981         0   0.14467E-04  584052.5 4131577.2    90.8      4.15      5.58
3.21     YES
 L0001982         0   0.14467E-04  584056.5 4131565.9    90.6      4.15      5.58
3.21     YES
 L0001983         0   0.14467E-04  584060.5 4131554.6    90.4      4.15      5.58
3.21     YES
 L0001984         0   0.14467E-04  584064.5 4131543.2    90.3      4.15      5.58
3.21     YES
 L0001985         0   0.14467E-04  584068.0 4131531.8    90.2      4.15      5.58
3.21     YES
 L0001986         0   0.14467E-04  584071.2 4131520.2    90.0      4.15      5.58
3.21     YES
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 L0001987         0   0.14467E-04  584074.3 4131508.6    90.2     4.15     5.58
3.21     YES
 L0001988         0   0.14467E-04  584077.4 4131497.0    90.0     4.15     5.58
3.21     YES
 L0001989         0   0.14467E-04  584080.6 4131485.5    89.5     4.15     5.58
3.21     YES
 L0001990         0   0.14467E-04  584083.7 4131473.9    89.4     4.15     5.58
3.21     YES
 L0001991         0   0.14467E-04  584086.8 4131462.3    89.3     4.15     5.58
3.21     YES
 L0001992         0   0.14467E-04  584090.0 4131450.7    89.2     4.15     5.58
3.21     YES
 L0001993         0   0.14467E-04  584093.1 4131439.1    89.1     4.15     5.58
3.21     YES
 L0001994         0   0.14467E-04  584096.2 4131427.5    89.0     4.15     5.58
3.21     YES
 L0001995         0   0.14467E-04  584099.3 4131416.0    89.2     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                       BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0001996         0   0.14467E-04  584102.5 4131404.4    89.2     4.15     5.58
3.21     YES
 L0001997         0   0.14467E-04  584105.6 4131392.8    89.0     4.15     5.58
3.21     YES
 L0001998         0   0.14467E-04  584108.7 4131381.2    88.9     4.15     5.58
3.21     YES
 L0001999         0   0.14467E-04  584111.1 4131369.4    88.7     4.15     5.58
3.21     YES
 L0002000         0   0.14467E-04  584113.3 4131357.7    88.6     4.15     5.58
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3.21     YES
 L0002001          0   0.14467E-04  584115.6 4131345.9    88.6      4.15      5.58
3.21     YES
 L0002002          0   0.14467E-04  584117.9 4131334.1    88.5      4.15      5.58
3.21     YES
 L0002003          0   0.14467E-04  584120.1 4131322.3    88.5      4.15      5.58
3.21     YES
 L0002004          0   0.14467E-04  584122.4 4131310.5    88.3      4.15      5.58
3.21     YES
 L0002005          0   0.14467E-04  584124.6 4131298.7    88.2      4.15      5.58
3.21     YES
 L0002006          0   0.14467E-04  584126.9 4131286.9    88.0      4.15      5.58
3.21     YES
 L0002007          0   0.14467E-04  584129.1 4131275.2    87.8      4.15      5.58
3.21     YES
 L0002008          0   0.14467E-04  584131.4 4131263.4    87.5      4.15      5.58
3.21     YES
 L0002009          0   0.14467E-04  584133.7 4131251.6    87.4      4.15      5.58
3.21     YES
 L0002010          0   0.14467E-04  584135.9 4131239.8    87.2      4.15      5.58
3.21     YES
 L0002011          0   0.14467E-04  584138.2 4131228.0    87.2      4.15      5.58
3.21     YES
 L0002012          0   0.14467E-04  584140.4 4131216.2    87.1      4.15      5.58
3.21     YES
 L0002013          0   0.14467E-04  584142.8 4131204.5    87.3      4.15      5.58
3.21     YES
 L0002014          0   0.14467E-04  584145.2 4131192.7    87.7      4.15      5.58
3.21     YES
 L0002015          0   0.14467E-04  584147.7 4131181.0    87.8      4.15      5.58
3.21     YES
 L0002016          0   0.14467E-04  584150.1 4131169.2    87.8      4.15      5.58
3.21     YES
 L0002017          0   0.14467E-04  584152.6 4131157.5    87.6      4.15      5.58
3.21     YES
 L0002018          0   0.14467E-04  584155.0 4131145.7    87.2      4.15      5.58
3.21     YES
 L0002019          0   0.14467E-04  584157.5 4131134.0    86.9      4.15      5.58
3.21     YES
 L0002020          0   0.14467E-04  584159.9 4131122.2    87.0      4.15      5.58
3.21     YES
 L0002021          0   0.14467E-04  584162.4 4131110.5    87.0      4.15      5.58
3.21     YES
 L0002022          0   0.14467E-04  584164.8 4131098.7    87.2      4.15      5.58
3.21     YES
 L0002023          0   0.14467E-04  584167.3 4131087.0    87.3      4.15      5.58
3.21     YES
 L0002024          0   0.14467E-04  584169.7 4131075.2    87.8      4.15      5.58
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3.21     YES
 L0002025         0   0.14467E-04  584172.2 4131063.5    88.2     4.15     5.58
3.21     YES
 L0002026         0   0.14467E-04  584174.6 4131051.7    88.4     4.15     5.58
3.21     YES
 L0002027         0   0.14467E-04  584177.1 4131040.0    88.5     4.15     5.58
3.21     YES
 L0002028         0   0.14467E-04  584180.4 4131028.5    88.4     4.15     5.58
3.21     YES
 L0002029         0   0.14467E-04  584183.7 4131016.9    88.3     4.15     5.58
3.21     YES
 L0002030         0   0.14467E-04  584187.1 4131005.4    88.5     4.15     5.58
3.21     YES
 L0002031         0   0.14467E-04  584190.4 4130993.9    88.7     4.15     5.58
3.21     YES
 L0002032         0   0.14467E-04  584193.7 4130982.4    88.9     4.15     5.58
3.21     YES
 L0002033         0   0.14467E-04  584197.1 4130970.8    89.2     4.15     5.58
3.21     YES
 L0002034         0   0.14467E-04  584200.4 4130959.3    89.4     4.15     5.58
3.21     YES
 L0002035         0   0.14467E-04  584203.8 4130947.8    89.6     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                    *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0002036         0   0.14467E-04  584207.1 4130936.2    89.7     4.15     5.58
3.21     YES
 L0002037         0   0.14467E-04  584210.4 4130924.7    89.8     4.15     5.58
3.21     YES
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 L0002038         0   0.14467E-04  584213.8 4130913.2    90.0     4.15     5.58
3.21     YES
 L0002039         0   0.14467E-04  584217.1 4130901.7    90.1     4.15     5.58
3.21     YES
 L0002040         0   0.14467E-04  584220.4 4130890.1    90.3     4.15     5.58
3.21     YES
 L0002041         0   0.14467E-04  584223.8 4130878.6    90.5     4.15     5.58
3.21     YES
 L0002042         0   0.14467E-04  584228.2 4130867.4    90.7     4.15     5.58
3.21     YES
 L0002043         0   0.14467E-04  584232.6 4130856.3    90.8     4.15     5.58
3.21     YES
 L0002044         0   0.14467E-04  584237.0 4130845.1    90.8     4.15     5.58
3.21     YES
 L0002045         0   0.14467E-04  584241.4 4130834.0    90.8     4.15     5.58
3.21     YES
 L0002046         0   0.14467E-04  584245.8 4130822.8    90.8     4.15     5.58
3.21     YES
 L0002047         0   0.14467E-04  584250.2 4130811.6    90.9     4.15     5.58
3.21     YES
 L0002048         0   0.14467E-04  584254.6 4130800.5    91.4     4.15     5.58
3.21     YES
 L0002049         0   0.14467E-04  584259.0 4130789.3    91.1     4.15     5.58
3.21     YES
 L0002050         0   0.14467E-04  584263.4 4130778.2    91.2     4.15     5.58
3.21     YES
 L0002051         0   0.14467E-04  584267.9 4130767.0    91.2     4.15     5.58
3.21     YES
 L0002052         0   0.14467E-04  584272.3 4130755.8    91.3     4.15     5.58
3.21     YES
 L0002053         0   0.14467E-04  584276.7 4130744.7    91.7     4.15     5.58
3.21     YES
 L0002054         0   0.14467E-04  584281.1 4130733.5    91.8     4.15     5.58
3.21     YES
 L0002055         0   0.14467E-04  584285.5 4130722.4    91.5     4.15     5.58
3.21     YES
 L0002056         0   0.14467E-04  584289.9 4130711.2    91.5     4.15     5.58
3.21     YES
 L0001782         0   0.00000E+00  584199.9 4131101.3    89.1     0.60     5.58
3.21     YES
 L0001783         0   0.00000E+00  584211.9 4131101.6    90.6     0.60     5.58
3.21     YES
 L0001784         0   0.00000E+00  584223.9 4131101.9    92.2     0.60     5.58
3.21     YES
 L0001785         0   0.00000E+00  584235.9 4131102.3    93.2     0.60     5.58
3.21     YES
 L0001786         0   0.00000E+00  584247.9 4131102.6    93.0     0.60     5.58
3.21     YES
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 L0001787         0   0.00000E+00  584259.9 4131102.9    93.0     0.60     5.58
3.21     YES
 L0001788         0   0.00000E+00  584271.9 4131103.3    93.2     0.60     5.58
3.21     YES
 L0001789         0   0.00000E+00  584283.9 4131103.6    93.2     0.60     5.58
3.21     YES
 L0001790         0   0.00000E+00  584295.9 4131103.9    93.0     0.60     5.58
3.21     YES
 L0001791         0   0.00000E+00  584307.9 4131104.3    92.6     0.60     5.58
3.21     YES
 L0001792         0   0.00000E+00  584319.9 4131104.6    92.3     0.60     5.58
3.21     YES
 L0001793         0   0.00000E+00  584331.9 4131104.9    92.0     0.60     5.58
3.21     YES
 L0001794         0   0.00000E+00  584343.9 4131105.3    92.0     0.60     5.58
3.21     YES
 L0001795         0   0.00000E+00  584355.9 4131105.6    91.9     0.60     5.58
3.21     YES
 L0001796         0   0.00000E+00  584367.9 4131105.8    91.9     0.60     5.58
3.21     YES
 L0001797         0   0.00000E+00  584379.9 4131106.0    91.9     0.60     5.58
3.21     YES
 L0001798         0   0.00000E+00  584391.9 4131106.2    91.6     0.60     5.58
3.21     YES
 L0001799         0   0.00000E+00  584403.9 4131106.4    91.4     0.60     5.58
3.21     YES
 L0001800         0   0.00000E+00  584415.9 4131106.6    91.3     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                   BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
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 L0001801         0   0.00000E+00  584427.9 4131106.8    91.2      0.60      5.58
3.21     YES
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3.21     YES
 L0001803         0   0.00000E+00  584451.9 4131107.3    90.9      0.60      5.58
3.21     YES
 L0001804         0   0.00000E+00  584463.9 4131107.5    90.8      0.60      5.58
3.21     YES
 L0001805         0   0.00000E+00  584475.9 4131107.7    90.6      0.60      5.58
3.21     YES
 L0001806         0   0.00000E+00  584487.9 4131107.9    90.2      0.60      5.58
3.21     YES
 L0001807         0   0.00000E+00  584499.9 4131108.1    89.8      0.60      5.58
3.21     YES
 L0001808         0   0.00000E+00  584511.9 4131108.3    89.6      0.60      5.58
3.21     YES
 L0001809         0   0.00000E+00  584523.9 4131108.5    89.4      0.60      5.58
3.21     YES
 L0001810         0   0.00000E+00  584535.9 4131108.7    89.4      0.60      5.58
3.21     YES
 L0001811         0   0.00000E+00  584547.9 4131108.9    89.5      0.60      5.58
3.21     YES
 L0001812         0   0.00000E+00  584559.9 4131109.1    89.4      0.60      5.58
3.21     YES
 L0001813         0   0.00000E+00  584571.9 4131109.3    89.2      0.60      5.58
3.21     YES
 L0001814         0   0.00000E+00  584583.9 4131109.5    89.0      0.60      5.58
3.21     YES
 L0001815         0   0.00000E+00  584595.9 4131109.7    88.8      0.60      5.58
3.21     YES
 L0001816         0   0.00000E+00  584607.9 4131109.9    88.6      0.60      5.58
3.21     YES
 L0001817         0   0.00000E+00  584619.8 4131110.1    88.3      0.60      5.58
3.21     YES
 L0001818         0   0.00000E+00  584631.8 4131110.3    88.1      0.60      5.58
3.21     YES
 L0001819         0   0.00000E+00  584643.8 4131110.5    87.9      0.60      5.58
3.21     YES
 L0001820         0   0.00000E+00  584655.8 4131110.7    87.8      0.60      5.58
3.21     YES
 L0001821         0   0.00000E+00  584667.8 4131110.9    87.7      0.60      5.58
3.21     YES
 L0001822         0   0.00000E+00  584679.8 4131111.1    87.5      0.60      5.58
3.21     YES
 L0001823         0   0.00000E+00  584691.8 4131111.4    87.4      0.60      5.58
3.21     YES
 L0001824         0   0.00000E+00  584703.8 4131111.6    87.3      0.60      5.58
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3.21     YES
 L0001825         0   0.00000E+00  584715.8 4131111.8    87.0     0.60     5.58
3.21     YES
 L0001826         0   0.00000E+00  584727.8 4131112.0    86.7     0.60     5.58
3.21     YES
 L0001827         0   0.00000E+00  584739.8 4131112.2    86.4     0.60     5.58
3.21     YES
 L0001828         0   0.00000E+00  584751.8 4131112.4    86.2     0.60     5.58
3.21     YES
 L0001829         0   0.00000E+00  584749.7 4131127.5    86.1     0.60     5.58
3.21     YES
 L0001830         0   0.00000E+00  584737.7 4131127.3    86.3     0.60     5.58
3.21     YES
 L0001831         0   0.00000E+00  584725.7 4131127.2    86.5     0.60     5.58
3.21     YES
 L0001832         0   0.00000E+00  584713.8 4131127.0    86.7     0.60     5.58
3.21     YES
 L0001833         0   0.00000E+00  584701.8 4131126.9    86.9     0.60     5.58
3.21     YES
 L0001834         0   0.00000E+00  584689.8 4131126.7    87.2     0.60     5.58
3.21     YES
 L0001835         0   0.00000E+00  584677.8 4131126.6    87.4     0.60     5.58
3.21     YES
 L0001836         0   0.00000E+00  584665.8 4131126.5    87.6     0.60     5.58
3.21     YES
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3.21     YES
 L0001838         0   0.00000E+00  584641.8 4131126.2    87.9     0.60     5.58
3.21     YES
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3.21     YES
 L0001840         0   0.00000E+00  584617.8 4131125.9    88.2     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
```

```
SZ     SOURCE   SCALAR VARY
     ID        CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)               BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0001841         0   0.00000E+00  584605.8 4131125.7    88.4     0.60     5.58
3.21     YES
 L0001842         0   0.00000E+00  584593.8 4131125.6    88.6     0.60     5.58
3.21     YES
 L0001843         0   0.00000E+00  584581.8 4131125.5    88.8     0.60     5.58
3.21     YES
 L0001844         0   0.00000E+00  584569.8 4131125.3    89.0     0.60     5.58
3.21     YES
 L0001845         0   0.00000E+00  584557.8 4131125.2    89.1     0.60     5.58
3.21     YES
 L0001846         0   0.00000E+00  584545.8 4131125.0    89.2     0.60     5.58
3.21     YES
 L0001847         0   0.00000E+00  584533.8 4131124.9    89.3     0.60     5.58
3.21     YES
 L0001848         0   0.00000E+00  584521.8 4131124.7    89.4     0.60     5.58
3.21     YES
 L0001849         0   0.00000E+00  584509.8 4131124.6    89.6     0.60     5.58
3.21     YES
 L0001850         0   0.00000E+00  584497.8 4131124.5    89.8     0.60     5.58
3.21     YES
 L0001851         0   0.00000E+00  584485.8 4131124.3    90.0     0.60     5.58
3.21     YES
 L0001852         0   0.00000E+00  584473.8 4131124.2    90.2     0.60     5.58
3.21     YES
 L0001853         0   0.00000E+00  584461.8 4131124.0    90.3     0.60     5.58
3.21     YES
 L0001854         0   0.00000E+00  584449.8 4131123.9    90.5     0.60     5.58
3.21     YES
 L0001855         0   0.00000E+00  584437.8 4131123.7    90.7     0.60     5.58
3.21     YES
 L0001856         0   0.00000E+00  584425.8 4131123.6    90.9     0.60     5.58
3.21     YES
 L0001857         0   0.00000E+00  584413.8 4131123.5    91.1     0.60     5.58
3.21     YES
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3.21     YES
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3.21     YES
 L0001860         0   0.00000E+00  584377.8 4131123.0    91.5     0.60     5.58
3.21     YES
 L0001861         0   0.00000E+00  584365.8 4131123.0    91.7     0.60     5.58
3.21     YES
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 L0001862         0   0.00000E+00  584353.8 4131122.9    91.8     0.60     5.58
3.21     YES
 L0001863         0   0.00000E+00  584341.8 4131122.9    92.0     0.60     5.58
3.21     YES
 L0001864         0   0.00000E+00  584329.8 4131122.8    92.1     0.60     5.58
3.21     YES
 L0001865         0   0.00000E+00  584317.8 4131122.8    92.3     0.60     5.58
3.21     YES
 L0001866         0   0.00000E+00  584305.8 4131122.7    92.4     0.60     5.58
3.21     YES
 L0001867         0   0.00000E+00  584293.8 4131122.7    92.5     0.60     5.58
3.21     YES
 L0001868         0   0.00000E+00  584281.8 4131122.6    92.6     0.60     5.58
3.21     YES
 L0001869         0   0.00000E+00  584269.8 4131122.6    92.8     0.60     5.58
3.21     YES
 L0001870         0   0.00000E+00  584257.8 4131122.5    92.9     0.60     5.58
3.21     YES
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3.21     YES
 L0001872         0   0.00000E+00  584233.8 4131122.4    93.2     0.60     5.58
3.21     YES
 L0001873         0   0.00000E+00  584221.8 4131122.4    92.5     0.60     5.58
3.21     YES
 L0001874         0   0.00000E+00  584209.8 4131122.3    91.6     0.60     5.58
3.21     YES
 L0001875         0   0.00000E+00  584197.8 4131122.3    89.8     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                             SOURCE IDs
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  ALL        L0001876    , L0001877    , L0001878    , L0001879    , L0001880    ,
L0001881    , L0001882    , L0001883    ,
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               L0001884    , L0001885    , L0001886    , L0001887    , L0001888    ,
L0001889    , L0001890    , L0001891    ,

               L0001892    , L0001893    , L0001894    , L0001895    , L0001896    ,
L0001897    , L0001898    , L0001899    ,

               L0001900    , L0001901    , L0001902    , L0001903    , L0001904    ,
L0001905    , L0001906    , L0001907    ,

               L0001908    , L0001909    , L0001910    , L0001911    , L0001912    ,
L0001913    , L0001914    , L0001915    ,

               L0001916    , L0001917    , L0001918    , L0001919    , L0001920    ,
L0001921    , L0001922    , L0001923    ,

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L0001937    , L0001938    , L0001939    ,

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L0001977    , L0001978    , L0001979    ,

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L0001985    , L0001986    , L0001987    ,

               L0001988    , L0001989    , L0001990    , L0001991    , L0001992    ,
L0001993    , L0001994    , L0001995    ,

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L0002001    , L0002002    , L0002003    ,

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L0002009    , L0002010    , L0002011    ,
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             L0002012    , L0002013    , L0002014    , L0002015    , L0002016    ,
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L0002025    , L0002026    , L0002027    ,

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L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                           *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                 SOURCE IDs
 -----------                                                 ----------


             L0002036    , L0002037    , L0002038    , L0002039    , L0002040    ,
L0002041    , L0002042    , L0002043    ,

             L0002044    , L0002045    , L0002046    , L0002047    , L0002048    ,
L0002049    , L0002050    , L0002051    ,

             L0002052    , L0002053    , L0002054    , L0002055    , L0002056    ,
L0001782    , L0001783    , L0001784    ,

             L0001785    , L0001786    , L0001787    , L0001788    , L0001789    ,
L0001790    , L0001791    , L0001792    ,

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L0001798    , L0001799    , L0001800    ,

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L0001806    , L0001807    , L0001808    ,

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L0001814    , L0001815    , L0001816    ,

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             L0001825    , L0001826    , L0001827    , L0001828    , L0001829    ,
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L0001838    , L0001839    , L0001840    ,

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L0001846    , L0001847    , L0001848    ,

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L0001854    , L0001855    , L0001856    ,

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L0001862    , L0001863    , L0001864    ,

             L0001865    , L0001866    , L0001867    , L0001868    , L0001869    ,
L0001870    , L0001871    , L0001872    ,

             L0001873    , L0001874    , L0001875    ,
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                SOURCE IDs
  --------   ---------                                ----------


              1918000.   L0001876    , L0001877    , L0001878    , L0001879    ,
L0001880    , L0001881    , L0001882    ,
 L0001883    ,

             L0001884    , L0001885    , L0001886    , L0001887    , L0001888    ,
L0001889    , L0001890    , L0001891    ,

             L0001892    , L0001893    , L0001894    , L0001895    , L0001896    ,
L0001897    , L0001898    , L0001899    ,

             L0001900    , L0001901    , L0001902    , L0001903    , L0001904    ,
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L0001905    , L0001906    , L0001907    ,

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L0001913    , L0001914    , L0001915    ,

             L0001916    , L0001917    , L0001918    , L0001919    , L0001920    ,
L0001921    , L0001922    , L0001923    ,

             L0001924    , L0001925    , L0001926    , L0001927    , L0001928    ,
L0001929    , L0001930    , L0001931    ,

             L0001932    , L0001933    , L0001934    , L0001935    , L0001936    ,
L0001937    , L0001938    , L0001939    ,

             L0001940    , L0001941    , L0001942    , L0001943    , L0001944    ,
L0001945    , L0001946    , L0001947    ,

             L0001948    , L0001949    , L0001950    , L0001951    , L0001952    ,
L0001953    , L0001954    , L0001955    ,

             L0001956    , L0001957    , L0001958    , L0001959    , L0001960    ,
L0001961    , L0001962    , L0001963    ,

             L0001964    , L0001965    , L0001966    , L0001967    , L0001968    ,
L0001969    , L0001970    , L0001971    ,

             L0001972    , L0001973    , L0001974    , L0001975    , L0001976    ,
L0001977    , L0001978    , L0001979    ,

             L0001980    , L0001981    , L0001982    , L0001983    , L0001984    ,
L0001985    , L0001986    , L0001987    ,

             L0001988    , L0001989    , L0001990    , L0001991    , L0001992    ,
L0001993    , L0001994    , L0001995    ,

             L0001996    , L0001997    , L0001998    , L0001999    , L0002000    ,
L0002001    , L0002002    , L0002003    ,

             L0002004    , L0002005    , L0002006    , L0002007    , L0002008    ,
L0002009    , L0002010    , L0002011    ,

             L0002012    , L0002013    , L0002014    , L0002015    , L0002016    ,
L0002017    , L0002018    , L0002019    ,

             L0002020    , L0002021    , L0002022    , L0002023    , L0002024    ,
L0002025    , L0002026    , L0002027    ,

             L0002028    , L0002029    , L0002030    , L0002031    , L0002032    ,
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L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                SOURCE IDs
  --------   ---------                                ----------


             L0002036    , L0002037    , L0002038    , L0002039    , L0002040    ,
L0002041    , L0002042    , L0002043    ,

             L0002044    , L0002045    , L0002046    , L0002047    , L0002048    ,
L0002049    , L0002050    , L0002051    ,

             L0002052    , L0002053    , L0002054    , L0002055    , L0002056    ,
L0001782    , L0001783    , L0001784    ,

             L0001785    , L0001786    , L0001787    , L0001788    , L0001789    ,
L0001790    , L0001791    , L0001792    ,

             L0001793    , L0001794    , L0001795    , L0001796    , L0001797    ,
L0001798    , L0001799    , L0001800    ,

             L0001801    , L0001802    , L0001803    , L0001804    , L0001805    ,
L0001806    , L0001807    , L0001808    ,

             L0001809    , L0001810    , L0001811    , L0001812    , L0001813    ,
L0001814    , L0001815    , L0001816    ,

             L0001817    , L0001818    , L0001819    , L0001820    , L0001821    ,
L0001822    , L0001823    , L0001824    ,

             L0001825    , L0001826    , L0001827    , L0001828    , L0001829    ,
L0001830    , L0001831    , L0001832    ,

             L0001833    , L0001834    , L0001835    , L0001836    , L0001837    ,
L0001838    , L0001839    , L0001840    ,
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             L0001841    , L0001842    , L0001843    , L0001844    , L0001845    ,
L0001846    , L0001847    , L0001848    ,

             L0001849    , L0001850    , L0001851    , L0001852    , L0001853    ,
L0001854    , L0001855    , L0001856    ,

             L0001857    , L0001858    , L0001859    , L0001860    , L0001861    ,
L0001862    , L0001863    , L0001864    ,

             L0001865    , L0001866    , L0001867    , L0001868    , L0001869    ,
L0001870    , L0001871    , L0001872    ,

             L0001873    , L0001874    , L0001875    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                         ***        20:34:19

                                    PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                              *** DISCRETE CARTESIAN RECEPTORS ***
                                            (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                           (METERS)

     ( 584291.4, 4131146.6,      91.8,      91.8,       0.0);         ( 584311.4,
4131146.6,      91.6,      91.6,       0.0);
     ( 584331.4, 4131146.6,      91.5,      91.5,       0.0);         ( 584351.4,
4131146.6,      91.1,      91.1,       0.0);
     ( 584371.4, 4131146.6,      90.8,      90.8,       0.0);         ( 584391.4,
4131146.6,      90.6,      90.6,       0.0);
     ( 584411.4, 4131146.6,      90.5,      90.5,       0.0);         ( 584431.4,
4131146.6,      90.4,      90.4,       0.0);
     ( 584451.4, 4131146.6,      90.0,      90.0,       0.0);         ( 584471.4,
4131146.6,      90.1,      90.1,       0.0);
     ( 584491.4, 4131146.6,      89.8,      89.8,       0.0);         ( 584511.4,
4131146.6,      89.3,      89.3,       0.0);
     ( 584231.4, 4131166.6,      91.4,      91.4,       0.0);         ( 584251.4,
4131166.6,      91.8,      91.8,       0.0);
     ( 584271.4, 4131166.6,      91.6,      91.6,       0.0);         ( 584291.4,
4131166.6,      91.5,      91.5,       0.0);
     ( 584311.4, 4131166.6,      91.4,      91.4,       0.0);         ( 584331.4,
4131166.6,      91.3,      91.3,       0.0);
     ( 584351.4, 4131166.6,      91.0,      91.0,       0.0);         ( 584371.4,
4131166.6,      90.7,      90.7,       0.0);
     ( 584391.4, 4131166.6,      90.5,      90.5,       0.0);         ( 584411.4,
4131166.6,      90.3,      90.3,       0.0);
```

```
     ( 584431.4, 4131166.6,      90.2,       90.2,       0.0);          ( 584451.4,
4131166.6,      89.8,      89.8,       0.0);
     ( 584471.4, 4131166.6,      90.0,       90.0,       0.0);          ( 584491.4,
4131166.6,      89.6,      89.6,       0.0);
     ( 584511.4, 4131166.6,      89.1,       89.1,       0.0);          ( 584231.4,
4131186.6,      91.1,      91.1,       0.0);
     ( 584251.4, 4131186.6,      91.5,       91.5,       0.0);          ( 584271.4,
4131186.6,      91.5,      91.5,       0.0);
     ( 584291.4, 4131186.6,      91.3,       91.3,       0.0);          ( 584311.4,
4131186.6,      91.3,      91.3,       0.0);
     ( 584331.4, 4131186.6,      91.2,       91.2,       0.0);          ( 584351.4,
4131186.6,      90.9,      90.9,       0.0);
     ( 584371.4, 4131186.6,      90.8,       90.8,       0.0);          ( 584391.4,
4131186.6,      90.5,      90.5,       0.0);
     ( 584411.4, 4131186.6,      90.2,       90.2,       0.0);          ( 584431.4,
4131186.6,      90.1,      90.1,       0.0);
     ( 584451.4, 4131186.6,      89.6,       89.6,       0.0);          ( 584471.4,
4131186.6,      89.8,      89.8,       0.0);
     ( 584491.4, 4131186.6,      89.4,       89.4,       0.0);          ( 584511.4,
4131186.6,      88.9,      88.9,       0.0);
     ( 584231.4, 4131206.6,      92.2,       92.2,       0.0);          ( 584251.4,
4131206.6,      91.6,      91.6,       0.0);
     ( 584271.4, 4131206.6,      91.4,       91.4,       0.0);          ( 584291.4,
4131206.6,      91.3,      91.3,       0.0);
     ( 584311.4, 4131206.6,      91.2,       91.2,       0.0);          ( 584331.4,
4131206.6,      91.0,      91.0,       0.0);
     ( 584351.4, 4131206.6,      90.8,       90.8,       0.0);          ( 584371.4,
4131206.6,      90.7,      90.7,       0.0);
     ( 584391.4, 4131206.6,      90.5,       90.5,       0.0);          ( 584411.4,
4131206.6,      90.2,      90.2,       0.0);
     ( 584431.4, 4131206.6,      89.9,       89.9,       0.0);          ( 584451.4,
4131206.6,      89.4,      89.4,       0.0);
     ( 584471.4, 4131206.6,      89.3,       89.3,       0.0);          ( 584491.4,
4131206.6,      88.9,      88.9,       0.0);
     ( 584211.4, 4131226.6,      89.9,       92.6,       0.0);          ( 584231.4,
4131226.6,      92.5,      92.5,       0.0);
     ( 584251.4, 4131226.6,      91.8,       91.8,       0.0);          ( 584271.4,
4131226.6,      91.5,      91.5,       0.0);
     ( 584291.4, 4131226.6,      91.3,       91.3,       0.0);          ( 584311.4,
4131226.6,      91.1,      91.1,       0.0);
     ( 584331.4, 4131226.6,      90.8,       90.8,       0.0);          ( 584351.4,
4131226.6,      90.6,      90.6,       0.0);
     ( 584371.4, 4131226.6,      90.4,       90.4,       0.0);          ( 584391.4,
4131226.6,      90.3,      90.3,       0.0);
     ( 584411.4, 4131226.6,      90.1,       90.1,       0.0);          ( 584431.4,
4131226.6,      89.8,      89.8,       0.0);
     ( 584451.4, 4131226.6,      89.1,       89.1,       0.0);          ( 584471.4,
4131226.6,      89.0,      89.0,       0.0);
```

```
     ( 584491.4, 4131226.6,      88.6,      88.6,       0.0);         ( 584211.4,
4131246.6,      89.6,      92.5,       0.0);
     ( 584231.4, 4131246.6,      92.5,      92.5,       0.0);         ( 584251.4,
4131246.6,      91.9,      91.9,       0.0);
     ( 584271.4, 4131246.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131246.6,      91.2,      91.2,       0.0);
     ( 584311.4, 4131246.6,      90.8,      90.8,       0.0);         ( 584331.4,
4131246.6,      90.6,      90.6,       0.0);
     ( 584351.4, 4131246.6,      90.4,      90.4,       0.0);         ( 584371.4,
4131246.6,      90.1,      90.1,       0.0);
     ( 584391.4, 4131246.6,      90.1,      90.1,       0.0);         ( 584411.4,
4131246.6,      90.0,      90.0,       0.0);
     ( 584431.4, 4131246.6,      89.7,      89.7,       0.0);         ( 584451.4,
4131246.6,      88.8,      88.8,       0.0);
     ( 584471.4, 4131246.6,      88.8,      88.8,       0.0);         ( 584211.4,
4131266.6,      90.8,      92.8,       0.0);
     ( 584231.4, 4131266.6,      92.6,      92.6,       0.0);         ( 584251.4,
4131266.6,      91.9,      91.9,       0.0);
     ( 584271.4, 4131266.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131266.6,      91.0,      91.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                                  PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                *** DISCRETE CARTESIAN RECEPTORS ***
                                              (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                              (METERS)

     ( 584211.4, 4131286.6,      91.8,      91.8,       0.0);         ( 584231.4,
4131286.6,      92.5,      92.5,       0.0);
     ( 584251.4, 4131286.6,      92.1,      92.1,       0.0);         ( 584211.4,
4131306.6,      92.6,      92.6,       0.0);
     ( 584231.4, 4131306.6,      92.3,      92.3,       0.0);         ( 584191.4,
4131326.6,      89.8,      92.8,       0.0);
     ( 584211.4, 4131326.6,      92.6,      92.6,       0.0);         ( 584191.4,
4131346.6,      91.0,      91.0,       0.0);
     ( 584171.4, 4131366.6,      91.8,      93.2,       0.0);         ( 584191.4,
4131366.6,      93.0,      93.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                       ***        20:34:19
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                                 PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                               (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                            (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,
10.80,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                                 PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                    *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   Met Data\745090.SFC
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                  Met Version:  14134
   Profile file:   Met Data\745090.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:    23244                  Upper air station no.:    23230
                  Name: UNKNOWN                                   Name:
OAKLAND/WSO_AP
                  Year:   2009                                    Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01  -12.1  0.213 -9.000 -9.000 -999.  236.     72.6  0.09   0.54
1.00    2.86    1.   10.0  282.5    2.0
 09 01 01   1 02  -14.9  0.261 -9.000 -9.000 -999.  321.    109.2  0.09   0.54
1.00    3.36   18.   10.0  282.0    2.0
 09 01 01   1 03   -9.1  0.160 -9.000 -9.000 -999.  158.     40.7  0.09   0.54
1.00    2.36   24.   10.0  282.0    2.0
 09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.4    2.0
 09 01 01   1 05   -3.9  0.075 -9.000 -9.000 -999.   49.      9.8  0.09   0.54
1.00    1.76   23.   10.0  281.4    2.0
 09 01 01   1 06   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36    2.   10.0  280.9    2.0
 09 01 01   1 07   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36   15.   10.0  280.9    2.0
 09 01 01   1 08   -4.7  0.084 -9.000 -9.000 -999.   61.     11.7  0.15   0.54
0.73    1.76  323.   10.0  280.9    2.0
 09 01 01   1 09   -4.9  0.212 -9.000 -9.000 -999.  234.    179.0  0.15   0.54
0.38    2.36  357.   10.0  280.4    2.0
 09 01 01   1 10    5.7  0.163  0.241  0.014   89.  159.    -69.3  0.09   0.54
0.25    1.76   11.   10.0  280.9    2.0
 09 01 01   1 11   12.2 -9.000 -9.000 -9.000  158. -999. -99999.0  0.24   0.54
0.21    0.00    0.   10.0  280.9    2.0
 09 01 01   1 12   16.0  0.426  0.456  0.016  216.  668.   -442.4  0.15   0.54
0.19    4.36  346.   10.0  281.4    2.0
 09 01 01   1 13   16.6  0.236  0.493  0.015  263.  305.    -71.8  0.36   0.54
0.19    1.76  253.   10.0  281.4    2.0
 09 01 01   1 14   14.2 -9.000 -9.000 -9.000  297. -999. -99999.0  0.24   0.54
0.20    0.00    0.   10.0  282.0    2.0
 09 01 01   1 15   44.9 -9.000 -9.000 -9.000  387. -999. -99999.0  0.24   0.54
0.23    0.00    0.   10.0  283.8    2.0
 09 01 01   1 16   13.2 -9.000 -9.000 -9.000  410. -999. -99999.0  0.24   0.54
```

```
0.31    0.00    0.   10.0  284.1    2.0
 09 01 01   1 17  -12.3  0.130 -9.000 -9.000 -999.  112.     16.2  0.15   0.54
0.55    2.36  351.   10.0  282.1    2.0
 09 01 01   1 18   -9.3  0.106 -9.000 -9.000 -999.   83.     11.6  0.36   0.54
1.00    1.76  297.   10.0  282.1    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  280.1    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 09 01 01 01   10.0 1    1.    2.86   282.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                                    PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
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                  **

       X-COORD (M)   Y-COORD (M)        CONC                            X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         584291.38    4131146.65        0.03179                              584311.38
4131146.65        0.02724
         584331.38    4131146.65        0.02380                              584351.38
4131146.65        0.02103
         584371.38    4131146.65        0.01874                              584391.38
4131146.65        0.01681
         584411.38    4131146.65        0.01518                              584431.38
4131146.65        0.01377
         584451.38    4131146.65        0.01257                              584471.38
4131146.65        0.01151
         584491.38    4131146.65        0.01058                              584511.38
4131146.65        0.00976
         584231.38    4131166.65        0.05408                              584251.38
4131166.65        0.04352
         584271.38    4131166.65        0.03594                              584291.38
4131166.65        0.03054
         584311.38    4131166.65        0.02637                              584331.38
4131166.65        0.02307
         584351.38    4131166.65        0.02041                              584371.38
4131166.65        0.01821
         584391.38    4131166.65        0.01635                              584411.38
4131166.65        0.01478
         584431.38    4131166.65        0.01342                              584451.38
4131166.65        0.01225
         584471.38    4131166.65        0.01123                              584491.38
4131166.65        0.01033
         584511.38    4131166.65        0.00953                              584231.38
4131186.65        0.05163
         584251.38    4131186.65        0.04152                              584271.38
4131186.65        0.03462
         584291.38    4131186.65        0.02948                              584311.38
4131186.65        0.02551
         584331.38    4131186.65        0.02235                              584351.38
4131186.65        0.01979
         584371.38    4131186.65        0.01767                              584391.38
4131186.65        0.01589
         584411.38    4131186.65        0.01437                              584431.38
4131186.65        0.01307
         584451.38    4131186.65        0.01194                              584471.38
4131186.65        0.01095
         584491.38    4131186.65        0.01008                              584511.38
4131186.65        0.00931
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         584231.38    4131206.65         0.04762                             584251.38
4131206.65         0.03974
         584271.38    4131206.65         0.03329                             584291.38
4131206.65         0.02843
         584311.38    4131206.65         0.02465                             584331.38
4131206.65         0.02165
         584351.38    4131206.65         0.01919                             584371.38
4131206.65         0.01715
         584391.38    4131206.65         0.01543                             584411.38
4131206.65         0.01397
         584431.38    4131206.65         0.01271                             584451.38
4131206.65         0.01162
         584471.38    4131206.65         0.01067                             584491.38
4131206.65         0.00983
         584211.38    4131226.65         0.06046                             584231.38
4131226.65         0.04550
         584251.38    4131226.65         0.03781                             584271.38
4131226.65         0.03201
         584291.38    4131226.65         0.02742                             584311.38
4131226.65         0.02383
         584331.38    4131226.65         0.02095                             584351.38
4131226.65         0.01859
         584371.38    4131226.65         0.01663                             584391.38
4131226.65         0.01498
         584411.38    4131226.65         0.01357                             584431.38
4131226.65         0.01236
         584451.38    4131226.65         0.01130                             584471.38
4131226.65         0.01038
         584491.38    4131226.65         0.00957                             584211.38
4131246.65         0.05732
         584231.38    4131246.65         0.04322                             584251.38
4131246.65         0.03607
         584271.38    4131246.65         0.03077                             584291.38
4131246.65         0.02643
         584311.38    4131246.65         0.02302                             584331.38
4131246.65         0.02026
         584351.38    4131246.65         0.01800                             584371.38
4131246.65         0.01612
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
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YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                          X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
         584391.38    4131246.65        0.01453                         584411.38
4131246.65        0.01317
         584431.38    4131246.65        0.01200                         584451.38
4131246.65        0.01099
         584471.38    4131246.65        0.01010                         584211.38
4131266.65        0.05375
         584231.38    4131266.65        0.04088                         584251.38
4131266.65        0.03452
         584271.38    4131266.65        0.02956                         584291.38
4131266.65        0.02547
         584211.38    4131286.65        0.05015                         584231.38
4131286.65        0.03870
         584251.38    4131286.65        0.03274                         584211.38
4131306.65        0.04523
         584231.38    4131306.65        0.03745                         584191.38
4131326.65        0.05953
         584211.38    4131326.65        0.04303                         584191.38
4131346.65        0.05532
         584171.38    4131366.65        0.06899                         584191.38
4131366.65        0.04860
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                            PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584291.38   4131146.65        0.14070  (09022019)                584311.38
 4131146.65        0.12684  (13122718)
        584331.38   4131146.65        0.11525  (11011719)                584351.38
 4131146.65        0.10539  (11020602)
        584371.38   4131146.65        0.09779  (11020602)                584391.38
 4131146.65        0.09086  (11020602)
        584411.38   4131146.65        0.08448  (11020602)                584431.38
 4131146.65        0.07916  (09012018)
        584451.38   4131146.65        0.07453  (11011718)                584471.38
 4131146.65        0.07018  (11011718)
        584491.38   4131146.65        0.06673  (11020520)                584511.38
 4131146.65        0.06362  (11020520)
        584231.38   4131166.65        0.21133  (13021720)                584251.38
 4131166.65        0.17774  (09022019)
        584271.38   4131166.65        0.15645  (09022019)                584291.38
 4131166.65        0.13828  (13122718)
        584311.38   4131166.65        0.12444  (11011719)                584331.38
 4131166.65        0.11278  (11011719)
        584351.38   4131166.65        0.10392  (11020602)                584371.38
 4131166.65        0.09625  (11020602)
        584391.38   4131166.65        0.08924  (11020602)                584411.38
 4131166.65        0.08317  (09012018)
        584431.38   4131166.65        0.07809  (11011718)                584451.38
 4131166.65        0.07334  (11011718)
        584471.38   4131166.65        0.06948  (11020520)                584491.38
 4131166.65        0.06613  (11020520)
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        584511.38   4131166.65        0.06296  (11020520)                  584231.38
4131186.65         0.20505  (09022019)
        584251.38   4131186.65        0.17498  (09022019)                  584271.38
4131186.65         0.15185  (09022019)
        584291.38   4131186.65        0.13517  (11011719)                  584311.38
4131186.65         0.12179  (11011719)
        584331.38   4131186.65        0.11086  (11020602)                  584351.38
4131186.65         0.10228  (11020602)
        584371.38   4131186.65        0.09450  (11020602)                  584391.38
4131186.65         0.08759  (09012018)
        584411.38   4131186.65        0.08201  (11011718)                  584431.38
4131186.65         0.07684  (11011718)
        584451.38   4131186.65        0.07247  (11020520)                  584471.38
4131186.65         0.06883  (11020520)
        584491.38   4131186.65        0.06541  (11020520)                  584511.38
4131186.65         0.06215  (11020520)
        584231.38   4131206.65        0.18878  (09022019)                  584251.38
4131206.65         0.16951  (09022019)
        584271.38   4131206.65        0.14818  (13122718)                  584291.38
4131206.65         0.13223  (11011719)
        584311.38   4131206.65        0.11889  (11020602)                  584331.38
4131206.65         0.10915  (11020602)
        584351.38   4131206.65        0.10045  (11020602)                  584371.38
4131206.65         0.09252  (11020602)
        584391.38   4131206.65        0.08634  (11011718)                  584411.38
4131206.65         0.08066  (11011718)
        584431.38   4131206.65        0.07574  (11020520)                  584451.38
4131206.65         0.07173  (11020520)
        584471.38   4131206.65        0.06801  (11020520)                  584491.38
4131206.65         0.06448  (11020520)
        584211.38   4131226.65        0.23108  (13021518)                  584231.38
4131226.65         0.17705  (09022019)
        584251.38   4131226.65        0.16286  (09022019)                  584271.38
4131226.65         0.14452  (11011719)
        584291.38   4131226.65        0.12903  (11011719)                  584311.38
4131226.65         0.11702  (11020602)
        584331.38   4131226.65        0.10720  (11020602)                  584351.38
4131226.65         0.09833  (11020602)
        584371.38   4131226.65        0.09115  (11011718)                  584391.38
4131226.65         0.08487  (11011718)
        584411.38   4131226.65        0.07932  (11020520)                  584431.38
4131226.65         0.07495  (11020520)
        584451.38   4131226.65        0.07081  (11020520)                  584471.38
4131226.65         0.06700  (11020520)
        584491.38   4131226.65        0.06335  (11020520)                  584211.38
4131246.65         0.22315  (09022019)
        584231.38   4131246.65        0.17370  (09022019)                  584251.38
4131246.65         0.15802  (13122718)
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       584271.38   4131246.65        0.14097  (11011719)               584291.38
 4131246.65        0.12613  (11020602)
       584311.38   4131246.65        0.11490  (11020602)               584331.38
 4131246.65        0.10490  (11020602)
       584351.38   4131246.65        0.09655  (11011718)               584371.38
 4131246.65        0.08955  (11011718)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                               *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                          ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)             X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584391.38   4131246.65        0.08327  (11020520)               584411.38
 4131246.65        0.07844  (11020520)
       584431.38   4131246.65        0.07397  (11020520)               584451.38
 4131246.65        0.06967  (11020520)
       584471.38   4131246.65        0.06577  (11020520)               584211.38
 4131266.65        0.21411  (09022019)
       584231.38   4131266.65        0.16706  (09022019)               584251.38
 4131266.65        0.15369  (11011719)
       584271.38   4131266.65        0.13700  (11011719)               584291.38
 4131266.65        0.12378  (11020602)
       584211.38   4131286.65        0.20371  (09022019)               584231.38
 4131286.65        0.16536  (13122718)
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       584251.38   4131286.65        0.14842  (11011719)                584211.38
 4131306.65        0.19443  (11091922)
       584231.38   4131306.65        0.16399  (11011719)                584191.38
 4131326.65        0.23079  (09022019)
       584211.38   4131326.65        0.18989  (11020621)                584191.38
 4131346.65        0.21899  (13122718)
       584171.38   4131366.65        0.25900  (09022019)                584191.38
 4131366.65        0.22972  (10021722)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                       ***        20:34:19

                                  PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584291.38   4131146.65        0.06549c (09010824)                584311.38
 4131146.65        0.05746c (09010824)
       584331.38   4131146.65        0.05142c (09010824)                584351.38
 4131146.65        0.04645c (09010824)
       584371.38   4131146.65        0.04221c (09010824)                584391.38
 4131146.65        0.03855c (09010824)
       584411.38   4131146.65        0.03535c (09010824)                584431.38
 4131146.65        0.03254c (09010824)
       584451.38   4131146.65        0.03004c (09010824)                584471.38
 4131146.65        0.02779c (09010824)
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       584491.38   4131146.65        0.02576c (09010824)                584511.38
4131146.65        0.02392c (09010824)
       584231.38   4131166.65        0.10145c (09010824)                584251.38
4131166.65        0.08816b (09112324)
       584271.38   4131166.65        0.07239c (09010824)                584291.38
4131166.65        0.06332c (09010824)
       584311.38   4131166.65        0.05612c (09010824)                584331.38
4131166.65        0.05027c (09010824)
       584351.38   4131166.65        0.04543c (09010824)                584371.38
4131166.65        0.04129c (09010824)
       584391.38   4131166.65        0.03772c (09010824)                584411.38
4131166.65        0.03459c (09010824)
       584431.38   4131166.65        0.03183c (09010824)                584451.38
4131166.65        0.02936c (09010824)
       584471.38   4131166.65        0.02714c (09010824)                584491.38
4131166.65        0.02514c (09010824)
       584511.38   4131166.65        0.02331c (09010824)                584231.38
4131186.65        0.09794c (09010824)
       584251.38   4131186.65        0.08178c (09010824)                584271.38
4131186.65        0.07041c (09010824)
       584291.38   4131186.65        0.06171c (09010824)                584311.38
4131186.65        0.05477c (09010824)
       584331.38   4131186.65        0.04911c (09010824)                584351.38
4131186.65        0.04439c (09010824)
       584371.38   4131186.65        0.04035c (09010824)                584391.38
4131186.65        0.03686c (09010824)
       584411.38   4131186.65        0.03379c (09010824)                584431.38
4131186.65        0.03107c (09010824)
       584451.38   4131186.65        0.02864c (09010824)                584471.38
4131186.65        0.02645c (09010824)
       584491.38   4131186.65        0.02447c (09010824)                584511.38
4131186.65        0.02266c (09010824)
       584231.38   4131206.65        0.10343b (09112324)                584251.38
4131206.65        0.07914c (09010824)
       584271.38   4131206.65        0.06843c (09010824)                584291.38
4131206.65        0.06010c (09010824)
       584311.38   4131206.65        0.05343c (09010824)                584331.38
4131206.65        0.04796c (09010824)
       584351.38   4131206.65        0.04335c (09010824)                584371.38
4131206.65        0.03939c (09010824)
       584391.38   4131206.65        0.03597c (09010824)                584411.38
4131206.65        0.03295c (09010824)
       584431.38   4131206.65        0.03028c (09010824)                584451.38
4131206.65        0.02787c (09010824)
       584471.38   4131206.65        0.02571c (09010824)                584491.38
4131206.65        0.02375c (09010824)
       584211.38   4131226.65        0.11235c (09010824)                584231.38
4131226.65        0.10610b (09112324)
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       584251.38   4131226.65       0.07589c (09010824)                584271.38
 4131226.65       0.06652c (09010824)
       584291.38   4131226.65       0.05854c (09010824)                584311.38
 4131226.65       0.05211c (09010824)
       584331.38   4131226.65       0.04679c (09010824)                584351.38
 4131226.65       0.04228c (09010824)
       584371.38   4131226.65       0.03841c (09010824)                584391.38
 4131226.65       0.03504c (09010824)
       584411.38   4131226.65       0.03207c (09010824)                584431.38
 4131226.65       0.02943c (09010824)
       584451.38   4131226.65       0.02706c (09010824)                584471.38
 4131226.65       0.02493c (09010824)
       584491.38   4131226.65       0.02309b (13120324)                584211.38
 4131246.65       0.10782c (09010824)
       584231.38   4131246.65       0.10000b (09112324)                584251.38
 4131246.65       0.07334c (09010824)
       584271.38   4131246.65       0.06464c (09010824)                584291.38
 4131246.65       0.05700c (09010824)
       584311.38   4131246.65       0.05076c (09010824)                584331.38
 4131246.65       0.04558c (09010824)
       584351.38   4131246.65       0.04117c (09010824)                584371.38
 4131246.65       0.03738c (09010824)
♀ *** AERMOD - VERSION  18081 ***   *** 
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                       ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **
```

```
      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584391.38   4131246.65        0.03406c (09010824)                584411.38
 4131246.65        0.03114c (09010824)
        584431.38   4131246.65        0.02854c (09010824)                584451.38
 4131246.65        0.02619c (09010824)
        584471.38   4131246.65        0.02417b (13120324)                584211.38
 4131266.65        0.10271c (09010824)
        584231.38   4131266.65        0.09536b (09112324)                584251.38
 4131266.65        0.07114c (09010824)
        584271.38   4131266.65        0.06279c (09010824)                584291.38
 4131266.65        0.05543c (09010824)
        584211.38   4131286.65        0.09760c (09010824)                584231.38
 4131286.65        0.08330b (09112324)
        584251.38   4131286.65        0.06859c (09010824)                584211.38
 4131306.65        0.09087b (09112324)
        584231.38   4131306.65        0.07698c (09010824)                584191.38
 4131326.65        0.11308c (09010824)
        584211.38   4131326.65        0.08678c (09010824)                584191.38
 4131346.65        0.10723c (09010824)
        584171.38   4131366.65        0.12901c (09010824)                584191.38
 4131366.65        0.09791c (09010824)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***


                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                **



                         NETWORK
GROUP ID                       AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS       0.06899 AT (  584171.38,  4131366.65,
```

```
91.85,    93.20,    0.00)  DC
          2ND HIGHEST VALUE IS       0.06046 AT (  584211.38,  4131226.65,
89.90,    92.59,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05953 AT (  584191.38,  4131326.65,
89.79,    92.75,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05732 AT (  584211.38,  4131246.65,
89.65,    92.53,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05532 AT (  584191.38,  4131346.65,
91.03,    91.03,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05408 AT (  584231.38,  4131166.65,
91.39,    91.39,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05375 AT (  584211.38,  4131266.65,
90.78,    92.76,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05163 AT (  584231.38,  4131186.65,
91.07,    91.07,    0.00)  DC
          9TH HIGHEST VALUE IS       0.05015 AT (  584211.38,  4131286.65,
91.79,    91.79,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04860 AT (  584191.38,  4131366.65,
92.99,    92.99,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                        *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                **

                                                              DATE
                                            NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
```

```
ALL      HIGH   1ST HIGH VALUE IS       0.25900  ON 09022019: AT (  584171.38,
4131366.65,    91.85,    93.20,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                 *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                **

                                                              DATE
                                                NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.12901c ON 09010824: AT (  584171.38,
4131366.65,    91.85,    93.20,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:34:19

                                   PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

```
*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of             0 Fatal Error Message(s)
A Total of            95 Warning Message(s)
A Total of         15496 Informational Message(s)

A Total of         43872 Hours Were Processed

A Total of         14061 Calm Hours Identified

A Total of          1435 Missing Hours Identified (  3.27 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     571        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     572        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     573        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     574        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     575        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     576        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     577        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     578        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     579        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     580        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     581        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     582        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     583        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     584        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

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SO W320     585        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     586        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     587        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     588        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     589        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     590        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     591        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     592        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     593        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     594        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     595        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     596        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     597        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     598        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     599        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     600        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     601        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     602        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     603        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     604        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     605        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     606        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     607        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     608        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
```

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SO W320     609        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     610        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     611        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     612        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     613        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     614        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     615        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     616        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     617        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     620        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     621        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     622        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     623        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     624        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     625        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     626        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     627        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     628        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     629        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     630        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     631        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     632        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     633        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     634        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

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SO W320     635         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     636         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     637         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     638         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     639         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     640         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     641         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     642         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     643         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     644         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     645         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     646         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     647         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     648         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     649         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     650         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     651         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     652         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     653         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     654         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     655         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     656         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     657         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     658         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

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SO W320     659        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     660        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     661        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     662        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     663        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     664        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     665        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     666        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
MX W481   43873         MAIN: Data Remaining After End of Year. Number of Hours=
       48

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/20/2018
** File: C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID TOG
   RUNORNOT RUN
   ERRORFIL Westport_SR-85_TOG.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ---------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.02257
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 0.60, 5.58
** 584214.591, 4130961.572, 89.16, 0.60, 5.58
```

```
** 584178.660, 4131112.482, 87.07, 0.60, 5.58
** 584111.110, 4131460.295, 89.98, 0.60, 5.58
** 584082.365, 4131549.404, 90.95, 0.60, 5.58
** 584032.062, 4131678.755, 92.34, 0.60, 5.58
** 583991.819, 4131739.119, 92.39, 0.60, 5.58
** ----------------------------------------------------------------------
   LOCATION L0001876     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001903     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001904     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
   LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
```

```
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001947     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
LOCATION L0001965     VOLUME   584004.604 4131719.942 92.58
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   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.02257
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
** 583972.941, 4131730.297, 92.00, 0.60, 5.58
** 584025.388, 4131653.752, 91.64, 0.60, 5.58
** 584066.495, 4131537.518, 90.53, 0.60, 5.58
** 584109.020, 4131380.177, 89.08, 0.60, 5.58
** 584141.622, 4131210.079, 87.10, 0.60, 5.58
** 584177.059, 4131039.980, 88.48, 0.60, 5.58
** 584223.836, 4130878.386, 90.99, 0.60, 5.58
** 584293.293, 4130702.618, 92.07, 0.60, 5.58
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   LOCATION L0001967     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
   LOCATION L0001992     VOLUME   584089.956 4131450.711 89.21
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LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002012     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002024     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002026     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
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   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0001782     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0001783     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0001784     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0001785     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0001786     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0001787     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0001788     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0001789     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0001790     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0001791     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0001792     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0001793     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0001794     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0001795     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0001796     VOLUME   584367.886 4131105.823 91.93
   LOCATION L0001797     VOLUME   584379.884 4131106.028 91.90
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   LOCATION L0001798     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0001799     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0001800     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0001801     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0001802     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0001803     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0001804     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0001805     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0001806     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0001807     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0001808     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0001809     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0001810     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0001811     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0001812     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0001813     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0001814     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0001815     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0001816     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0001817     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0001818     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0001819     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0001820     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0001821     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0001822     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0001823     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0001824     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0001825     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0001826     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0001827     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0001828     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0001829     VOLUME   584749.747 4131127.452 86.14
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   LOCATION L0001830     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0001831     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0001832     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0001833     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0001834     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0001835     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0001836     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0001837     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0001838     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0001839     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0001840     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0001841     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0001842     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0001843     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0001844     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0001845     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0001846     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0001847     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0001848     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0001849     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0001850     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0001851     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0001852     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0001853     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0001854     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0001855     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0001856     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0001857     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0001858     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0001859     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0001860     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0001861     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0001862     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0001863     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0001864     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0001865     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0001866     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0001867     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0001868     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0001869     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0001870     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0001871     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0001872     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0001873     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0001874     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0001875     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
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** LINE VOLUME Source ID = SLINE1
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   SRCPARAM L0001877     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001878     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001879     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001880     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001881     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001882     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001883     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001884     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001885     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001886     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001887     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001888     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001889     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001890     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001891     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001892     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001893     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001894     0.000248022      0.60       5.58       2.93
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   SRCPARAM L0001897     0.000248022      0.60       5.58       2.93
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   SRCPARAM L0001907     0.000248022      0.60       5.58       2.93
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   SRCPARAM L0001913     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001914     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001915     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001916     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001917     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001918     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001919     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001920     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001921     0.000248022      0.60       5.58       2.93
   SRCPARAM L0001922     0.000248022      0.60       5.58       2.93
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   SRCPARAM L0001924     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001925     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001926     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001927     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001928     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001929     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001930     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001931     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001932     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001933     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001934     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001935     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001936     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001937     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001938     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001939     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001940     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001941     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001942     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001943     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001944     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001945     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001946     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001947     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001948     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001949     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001950     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001951     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001952     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001953     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001954     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001955     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001956     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001957     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001958     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001959     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001960     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001961     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001962     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001963     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001964     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001965     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001966     0.000248022      0.60      5.58      2.93
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001967     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0001968     0.0002507778      0.60      5.58      3.21
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SRCPARAM L0001969     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001970     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001971     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001972     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001973     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001974     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001975     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001976     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001977     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001978     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001979     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001980     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001981     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001982     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001983     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001984     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001985     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001986     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001987     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001988     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001989     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001990     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001991     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001992     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001993     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001994     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001995     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001996     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001997     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001998     0.0002507778       0.60       5.58       3.21
SRCPARAM L0001999     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002000     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002001     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002002     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002003     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002004     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002005     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002006     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002007     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002008     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002009     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002010     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002011     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002012     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002013     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002014     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002015     0.0002507778       0.60       5.58       3.21
SRCPARAM L0002016     0.0002507778       0.60       5.58       3.21
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   SRCPARAM L0002017     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002018     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002019     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002020     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002021     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002022     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002023     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002024     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002025     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002026     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002027     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002028     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002029     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002030     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002031     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002032     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002033     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002034     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002035     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002036     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002037     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002038     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002039     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002040     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002041     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002042     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002043     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002044     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002045     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002046     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002047     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002048     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002049     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002050     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002051     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002052     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002053     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002054     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002055     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002056     0.0002507778      0.60      5.58      3.21
** --------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0001782           0.0      0.60      5.58      3.21
   SRCPARAM L0001783           0.0      0.60      5.58      3.21
   SRCPARAM L0001784           0.0      0.60      5.58      3.21
   SRCPARAM L0001785           0.0      0.60      5.58      3.21
   SRCPARAM L0001786           0.0      0.60      5.58      3.21
   SRCPARAM L0001787           0.0      0.60      5.58      3.21
```

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   SRCPARAM L0001788           0.0      0.60       5.58      3.21
   SRCPARAM L0001789           0.0      0.60       5.58      3.21
   SRCPARAM L0001790           0.0      0.60       5.58      3.21
   SRCPARAM L0001791           0.0      0.60       5.58      3.21
   SRCPARAM L0001792           0.0      0.60       5.58      3.21
   SRCPARAM L0001793           0.0      0.60       5.58      3.21
   SRCPARAM L0001794           0.0      0.60       5.58      3.21
   SRCPARAM L0001795           0.0      0.60       5.58      3.21
   SRCPARAM L0001796           0.0      0.60       5.58      3.21
   SRCPARAM L0001797           0.0      0.60       5.58      3.21
   SRCPARAM L0001798           0.0      0.60       5.58      3.21
   SRCPARAM L0001799           0.0      0.60       5.58      3.21
   SRCPARAM L0001800           0.0      0.60       5.58      3.21
   SRCPARAM L0001801           0.0      0.60       5.58      3.21
   SRCPARAM L0001802           0.0      0.60       5.58      3.21
   SRCPARAM L0001803           0.0      0.60       5.58      3.21
   SRCPARAM L0001804           0.0      0.60       5.58      3.21
   SRCPARAM L0001805           0.0      0.60       5.58      3.21
   SRCPARAM L0001806           0.0      0.60       5.58      3.21
   SRCPARAM L0001807           0.0      0.60       5.58      3.21
   SRCPARAM L0001808           0.0      0.60       5.58      3.21
   SRCPARAM L0001809           0.0      0.60       5.58      3.21
   SRCPARAM L0001810           0.0      0.60       5.58      3.21
   SRCPARAM L0001811           0.0      0.60       5.58      3.21
   SRCPARAM L0001812           0.0      0.60       5.58      3.21
   SRCPARAM L0001813           0.0      0.60       5.58      3.21
   SRCPARAM L0001814           0.0      0.60       5.58      3.21
   SRCPARAM L0001815           0.0      0.60       5.58      3.21
   SRCPARAM L0001816           0.0      0.60       5.58      3.21
   SRCPARAM L0001817           0.0      0.60       5.58      3.21
   SRCPARAM L0001818           0.0      0.60       5.58      3.21
   SRCPARAM L0001819           0.0      0.60       5.58      3.21
   SRCPARAM L0001820           0.0      0.60       5.58      3.21
   SRCPARAM L0001821           0.0      0.60       5.58      3.21
   SRCPARAM L0001822           0.0      0.60       5.58      3.21
   SRCPARAM L0001823           0.0      0.60       5.58      3.21
   SRCPARAM L0001824           0.0      0.60       5.58      3.21
   SRCPARAM L0001825           0.0      0.60       5.58      3.21
   SRCPARAM L0001826           0.0      0.60       5.58      3.21
   SRCPARAM L0001827           0.0      0.60       5.58      3.21
   SRCPARAM L0001828           0.0      0.60       5.58      3.21
** ------------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0001829           0.0      0.60       5.58      3.21
   SRCPARAM L0001830           0.0      0.60       5.58      3.21
   SRCPARAM L0001831           0.0      0.60       5.58      3.21
   SRCPARAM L0001832           0.0      0.60       5.58      3.21
   SRCPARAM L0001833           0.0      0.60       5.58      3.21
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   SRCPARAM L0001834           0.0      0.60      5.58      3.21
   SRCPARAM L0001835           0.0      0.60      5.58      3.21
   SRCPARAM L0001836           0.0      0.60      5.58      3.21
   SRCPARAM L0001837           0.0      0.60      5.58      3.21
   SRCPARAM L0001838           0.0      0.60      5.58      3.21
   SRCPARAM L0001839           0.0      0.60      5.58      3.21
   SRCPARAM L0001840           0.0      0.60      5.58      3.21
   SRCPARAM L0001841           0.0      0.60      5.58      3.21
   SRCPARAM L0001842           0.0      0.60      5.58      3.21
   SRCPARAM L0001843           0.0      0.60      5.58      3.21
   SRCPARAM L0001844           0.0      0.60      5.58      3.21
   SRCPARAM L0001845           0.0      0.60      5.58      3.21
   SRCPARAM L0001846           0.0      0.60      5.58      3.21
   SRCPARAM L0001847           0.0      0.60      5.58      3.21
   SRCPARAM L0001848           0.0      0.60      5.58      3.21
   SRCPARAM L0001849           0.0      0.60      5.58      3.21
   SRCPARAM L0001850           0.0      0.60      5.58      3.21
   SRCPARAM L0001851           0.0      0.60      5.58      3.21
   SRCPARAM L0001852           0.0      0.60      5.58      3.21
   SRCPARAM L0001853           0.0      0.60      5.58      3.21
   SRCPARAM L0001854           0.0      0.60      5.58      3.21
   SRCPARAM L0001855           0.0      0.60      5.58      3.21
   SRCPARAM L0001856           0.0      0.60      5.58      3.21
   SRCPARAM L0001857           0.0      0.60      5.58      3.21
   SRCPARAM L0001858           0.0      0.60      5.58      3.21
   SRCPARAM L0001859           0.0      0.60      5.58      3.21
   SRCPARAM L0001860           0.0      0.60      5.58      3.21
   SRCPARAM L0001861           0.0      0.60      5.58      3.21
   SRCPARAM L0001862           0.0      0.60      5.58      3.21
   SRCPARAM L0001863           0.0      0.60      5.58      3.21
   SRCPARAM L0001864           0.0      0.60      5.58      3.21
   SRCPARAM L0001865           0.0      0.60      5.58      3.21
   SRCPARAM L0001866           0.0      0.60      5.58      3.21
   SRCPARAM L0001867           0.0      0.60      5.58      3.21
   SRCPARAM L0001868           0.0      0.60      5.58      3.21
   SRCPARAM L0001869           0.0      0.60      5.58      3.21
   SRCPARAM L0001870           0.0      0.60      5.58      3.21
   SRCPARAM L0001871           0.0      0.60      5.58      3.21
   SRCPARAM L0001872           0.0      0.60      5.58      3.21
   SRCPARAM L0001873           0.0      0.60      5.58      3.21
   SRCPARAM L0001874           0.0      0.60      5.58      3.21
   SRCPARAM L0001875           0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
****************************************
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```
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED Westport_SR-85_TOG.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_SR-85_TOG.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_SR-85_TOG.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_SR-85_TOG.AD\AN00GALL.PLT 33
   SUMMFILE Westport_SR-85_TOG.sum
OU FINISHED
**
****************************************
** Project Parameters
****************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
**
```

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/20/2018
** File: C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID TOG
   RUNORNOT RUN
   ERRORFIL Westport_SR-85_TOG.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.02257
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 0.60, 5.58
** 584214.591, 4130961.572, 89.16, 0.60, 5.58
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** 584178.660, 4131112.482, 87.07, 0.60, 5.58
** 584111.110, 4131460.295, 89.98, 0.60, 5.58
** 584082.365, 4131549.404, 90.95, 0.60, 5.58
** 584032.062, 4131678.755, 92.34, 0.60, 5.58
** 583991.819, 4131739.119, 92.39, 0.60, 5.58
** ---------------------------------------------------------------------
   LOCATION L0001876     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001903     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001904     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
   LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
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LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001947     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
LOCATION L0001965     VOLUME   584004.604 4131719.942 92.58
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   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.02257
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
** 583972.941, 4131730.297, 92.00, 0.60, 5.58
** 584025.388, 4131653.752, 91.64, 0.60, 5.58
** 584066.495, 4131537.518, 90.53, 0.60, 5.58
** 584109.020, 4131380.177, 89.08, 0.60, 5.58
** 584141.622, 4131210.079, 87.10, 0.60, 5.58
** 584177.059, 4131039.980, 88.48, 0.60, 5.58
** 584223.836, 4130878.386, 90.99, 0.60, 5.58
** 584293.293, 4130702.618, 92.07, 0.60, 5.58
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   LOCATION L0001967     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
   LOCATION L0001992     VOLUME   584089.956 4131450.711 89.21
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LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002012     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002024     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002026     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
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   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0001782     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0001783     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0001784     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0001785     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0001786     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0001787     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0001788     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0001789     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0001790     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0001791     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0001792     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0001793     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0001794     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0001795     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0001796     VOLUME   584367.886 4131105.823 91.93
   LOCATION L0001797     VOLUME   584379.884 4131106.028 91.90
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   LOCATION L0001798     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0001799     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0001800     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0001801     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0001802     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0001803     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0001804     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0001805     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0001806     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0001807     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0001808     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0001809     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0001810     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0001811     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0001812     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0001813     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0001814     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0001815     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0001816     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0001817     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0001818     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0001819     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0001820     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0001821     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0001822     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0001823     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0001824     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0001825     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0001826     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0001827     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0001828     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0001829     VOLUME   584749.747 4131127.452 86.14
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   LOCATION L0001830     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0001831     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0001832     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0001833     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0001834     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0001835     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0001836     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0001837     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0001838     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0001839     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0001840     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0001841     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0001842     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0001843     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0001844     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0001845     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0001846     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0001847     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0001848     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0001849     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0001850     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0001851     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0001852     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0001853     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0001854     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0001855     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0001856     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0001857     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0001858     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0001859     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0001860     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0001861     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0001862     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0001863     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0001864     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0001865     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0001866     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0001867     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0001868     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0001869     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0001870     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0001871     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0001872     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0001873     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0001874     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0001875     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
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** LINE VOLUME Source ID = SLINE1
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   SRCPARAM L0001878     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001879     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001880     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001881     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001882     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001883     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001884     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001885     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001886     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001887     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001888     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001889     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001890     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001891     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001892     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001893     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001894     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001895     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001896     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001897     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001898     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001899     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001900     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001901     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001902     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001903     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001904     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001905     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001906     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001907     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001908     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001909     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001910     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001911     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001912     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001913     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001914     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001915     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001916     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001917     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001918     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001919     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001920     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001921     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001922     0.000248022      0.60      5.58      2.93
```

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   SRCPARAM L0001923     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001924     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001925     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001926     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001927     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001928     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001929     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001930     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001931     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001932     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001933     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001934     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001935     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001936     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001937     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001938     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001939     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001940     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001941     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001942     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001943     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001944     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001945     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001946     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001947     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001948     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001949     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001950     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001951     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001952     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001953     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001954     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001955     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001956     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001957     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001958     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001959     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001960     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001961     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001962     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001963     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001964     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001965     0.000248022      0.60      5.58      2.93
   SRCPARAM L0001966     0.000248022      0.60      5.58      2.93
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001967     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0001968     0.0002507778      0.60      5.58      3.21
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SRCPARAM L0001969     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001970     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001971     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001972     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001973     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001974     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001975     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001976     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001977     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001978     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001979     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001980     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001981     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001982     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001983     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001984     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001985     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001986     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001987     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001988     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001989     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001990     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001991     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001992     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001993     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001994     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001995     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001996     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001997     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001998     0.0002507778      0.60       5.58       3.21
SRCPARAM L0001999     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002000     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002001     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002002     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002003     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002004     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002005     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002006     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002007     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002008     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002009     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002010     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002011     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002012     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002013     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002014     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002015     0.0002507778      0.60       5.58       3.21
SRCPARAM L0002016     0.0002507778      0.60       5.58       3.21
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   SRCPARAM L0002017     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002018     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002019     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002020     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002021     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002022     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002023     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002024     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002025     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002026     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002027     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002028     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002029     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002030     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002031     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002032     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002033     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002034     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002035     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002036     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002037     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002038     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002039     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002040     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002041     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002042     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002043     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002044     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002045     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002046     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002047     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002048     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002049     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002050     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002051     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002052     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002053     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002054     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002055     0.0002507778      0.60      5.58      3.21
   SRCPARAM L0002056     0.0002507778      0.60      5.58      3.21
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0001782           0.0      0.60      5.58      3.21
   SRCPARAM L0001783           0.0      0.60      5.58      3.21
   SRCPARAM L0001784           0.0      0.60      5.58      3.21
   SRCPARAM L0001785           0.0      0.60      5.58      3.21
   SRCPARAM L0001786           0.0      0.60      5.58      3.21
   SRCPARAM L0001787           0.0      0.60      5.58      3.21
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   SRCPARAM L0001788          0.0      0.60      5.58      3.21
   SRCPARAM L0001789          0.0      0.60      5.58      3.21
   SRCPARAM L0001790          0.0      0.60      5.58      3.21
   SRCPARAM L0001791          0.0      0.60      5.58      3.21
   SRCPARAM L0001792          0.0      0.60      5.58      3.21
   SRCPARAM L0001793          0.0      0.60      5.58      3.21
   SRCPARAM L0001794          0.0      0.60      5.58      3.21
   SRCPARAM L0001795          0.0      0.60      5.58      3.21
   SRCPARAM L0001796          0.0      0.60      5.58      3.21
   SRCPARAM L0001797          0.0      0.60      5.58      3.21
   SRCPARAM L0001798          0.0      0.60      5.58      3.21
   SRCPARAM L0001799          0.0      0.60      5.58      3.21
   SRCPARAM L0001800          0.0      0.60      5.58      3.21
   SRCPARAM L0001801          0.0      0.60      5.58      3.21
   SRCPARAM L0001802          0.0      0.60      5.58      3.21
   SRCPARAM L0001803          0.0      0.60      5.58      3.21
   SRCPARAM L0001804          0.0      0.60      5.58      3.21
   SRCPARAM L0001805          0.0      0.60      5.58      3.21
   SRCPARAM L0001806          0.0      0.60      5.58      3.21
   SRCPARAM L0001807          0.0      0.60      5.58      3.21
   SRCPARAM L0001808          0.0      0.60      5.58      3.21
   SRCPARAM L0001809          0.0      0.60      5.58      3.21
   SRCPARAM L0001810          0.0      0.60      5.58      3.21
   SRCPARAM L0001811          0.0      0.60      5.58      3.21
   SRCPARAM L0001812          0.0      0.60      5.58      3.21
   SRCPARAM L0001813          0.0      0.60      5.58      3.21
   SRCPARAM L0001814          0.0      0.60      5.58      3.21
   SRCPARAM L0001815          0.0      0.60      5.58      3.21
   SRCPARAM L0001816          0.0      0.60      5.58      3.21
   SRCPARAM L0001817          0.0      0.60      5.58      3.21
   SRCPARAM L0001818          0.0      0.60      5.58      3.21
   SRCPARAM L0001819          0.0      0.60      5.58      3.21
   SRCPARAM L0001820          0.0      0.60      5.58      3.21
   SRCPARAM L0001821          0.0      0.60      5.58      3.21
   SRCPARAM L0001822          0.0      0.60      5.58      3.21
   SRCPARAM L0001823          0.0      0.60      5.58      3.21
   SRCPARAM L0001824          0.0      0.60      5.58      3.21
   SRCPARAM L0001825          0.0      0.60      5.58      3.21
   SRCPARAM L0001826          0.0      0.60      5.58      3.21
   SRCPARAM L0001827          0.0      0.60      5.58      3.21
   SRCPARAM L0001828          0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0001829          0.0      0.60      5.58      3.21
   SRCPARAM L0001830          0.0      0.60      5.58      3.21
   SRCPARAM L0001831          0.0      0.60      5.58      3.21
   SRCPARAM L0001832          0.0      0.60      5.58      3.21
   SRCPARAM L0001833          0.0      0.60      5.58      3.21
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   SRCPARAM L0001834           0.0      0.60      5.58      3.21
   SRCPARAM L0001835           0.0      0.60      5.58      3.21
   SRCPARAM L0001836           0.0      0.60      5.58      3.21
   SRCPARAM L0001837           0.0      0.60      5.58      3.21
   SRCPARAM L0001838           0.0      0.60      5.58      3.21
   SRCPARAM L0001839           0.0      0.60      5.58      3.21
   SRCPARAM L0001840           0.0      0.60      5.58      3.21
   SRCPARAM L0001841           0.0      0.60      5.58      3.21
   SRCPARAM L0001842           0.0      0.60      5.58      3.21
   SRCPARAM L0001843           0.0      0.60      5.58      3.21
   SRCPARAM L0001844           0.0      0.60      5.58      3.21
   SRCPARAM L0001845           0.0      0.60      5.58      3.21
   SRCPARAM L0001846           0.0      0.60      5.58      3.21
   SRCPARAM L0001847           0.0      0.60      5.58      3.21
   SRCPARAM L0001848           0.0      0.60      5.58      3.21
   SRCPARAM L0001849           0.0      0.60      5.58      3.21
   SRCPARAM L0001850           0.0      0.60      5.58      3.21
   SRCPARAM L0001851           0.0      0.60      5.58      3.21
   SRCPARAM L0001852           0.0      0.60      5.58      3.21
   SRCPARAM L0001853           0.0      0.60      5.58      3.21
   SRCPARAM L0001854           0.0      0.60      5.58      3.21
   SRCPARAM L0001855           0.0      0.60      5.58      3.21
   SRCPARAM L0001856           0.0      0.60      5.58      3.21
   SRCPARAM L0001857           0.0      0.60      5.58      3.21
   SRCPARAM L0001858           0.0      0.60      5.58      3.21
   SRCPARAM L0001859           0.0      0.60      5.58      3.21
   SRCPARAM L0001860           0.0      0.60      5.58      3.21
   SRCPARAM L0001861           0.0      0.60      5.58      3.21
   SRCPARAM L0001862           0.0      0.60      5.58      3.21
   SRCPARAM L0001863           0.0      0.60      5.58      3.21
   SRCPARAM L0001864           0.0      0.60      5.58      3.21
   SRCPARAM L0001865           0.0      0.60      5.58      3.21
   SRCPARAM L0001866           0.0      0.60      5.58      3.21
   SRCPARAM L0001867           0.0      0.60      5.58      3.21
   SRCPARAM L0001868           0.0      0.60      5.58      3.21
   SRCPARAM L0001869           0.0      0.60      5.58      3.21
   SRCPARAM L0001870           0.0      0.60      5.58      3.21
   SRCPARAM L0001871           0.0      0.60      5.58      3.21
   SRCPARAM L0001872           0.0      0.60      5.58      3.21
   SRCPARAM L0001873           0.0      0.60      5.58      3.21
   SRCPARAM L0001874           0.0      0.60      5.58      3.21
   SRCPARAM L0001875           0.0      0.60      5.58      3.21
** ------------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
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```
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED Westport_SR-85_TOG.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_SR-85_TOG.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_SR-85_TOG.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_SR-85_TOG.AD\AN00GALL.PLT 33
   SUMMFILE Westport_SR-85_TOG.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of           94 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
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```
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     571        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     572        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     573        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     574        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     575        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     576        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     577        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     578        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     579        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     580        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     581        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     582        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     583        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     584        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     585        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     586        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     587        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     588        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     589        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     590        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     591        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     592        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     593         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     594         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     595         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     596         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     597         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     598         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     599         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     600         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     601         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     602         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     603         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     604         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     605         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     606         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     607         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     608         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     609         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     610         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     611         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     612         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     613         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     614         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     615         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     616         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     617        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     620        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     621        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     622        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     623        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     624        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     625        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     626        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     627        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     628        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     629        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     630        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     631        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     632        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     633        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     634        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     635        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     636        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     637        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     638        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     639        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     640        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     641        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     642        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     643         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     644         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     645         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     646         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     647         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     648         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     649         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     650         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     651         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     652         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     653         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     654         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     655         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     656         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     657         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     658         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     659         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     660         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     661         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     662         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     663         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     664         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     665         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     666         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
```

```
 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   275 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   1918000.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  TOG

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
```

```
     and Calculates ANNUAL Averages

 **This Run Includes:    275 Source(s);       1 Source Group(s); and     100
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    275 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  14134

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    11.90 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                              ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Westport_SR-85_TOG.err
```

```
 **File for Summary of Results:   Westport_SR-85_TOG.sum

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                   BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -


 L0001876         0   0.24802E-03  584315.9 4130704.1    92.2     0.60     5.58
2.93    YES
 L0001877         0   0.24802E-03  584311.5 4130715.3    92.0     0.60     5.58
2.93    YES
 L0001878         0   0.24802E-03  584307.1 4130726.5    91.5     0.60     5.58
2.93    YES
 L0001879         0   0.24802E-03  584302.7 4130737.6    91.4     0.60     5.58
2.93    YES
 L0001880         0   0.24802E-03  584298.3 4130748.8    91.4     0.60     5.58
2.93    YES
 L0001881         0   0.24802E-03  584293.9 4130760.0    91.9     0.60     5.58
2.93    YES
 L0001882         0   0.24802E-03  584289.5 4130771.1    91.9     0.60     5.58
2.93    YES
 L0001883         0   0.24802E-03  584285.1 4130782.3    91.4     0.60     5.58
2.93    YES
 L0001884         0   0.24802E-03  584280.7 4130793.5    91.0     0.60     5.58
2.93    YES
 L0001885         0   0.24802E-03  584276.3 4130804.6    90.9     0.60     5.58
2.93    YES
 L0001886         0   0.24802E-03  584271.9 4130815.8    90.8     0.60     5.58
2.93    YES
 L0001887         0   0.24802E-03  584267.5 4130827.0    90.7     0.60     5.58
2.93    YES
 L0001888         0   0.24802E-03  584263.2 4130838.1    90.6     0.60     5.58
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2.93     YES
 L0001889         0   0.24802E-03  584258.8 4130849.3    90.5      0.60      5.58
2.93     YES
 L0001890         0   0.24802E-03  584254.4 4130860.5    90.3      0.60      5.58
2.93     YES
 L0001891         0   0.24802E-03  584250.0 4130871.6    90.2      0.60      5.58
2.93     YES
 L0001892         0   0.24802E-03  584245.6 4130882.8    90.2      0.60      5.58
2.93     YES
 L0001893         0   0.24802E-03  584241.2 4130894.0    90.1      0.60      5.58
2.93     YES
 L0001894         0   0.24802E-03  584236.8 4130905.1    89.9      0.60      5.58
2.93     YES
 L0001895         0   0.24802E-03  584232.4 4130916.3    89.6      0.60      5.58
2.93     YES
 L0001896         0   0.24802E-03  584228.0 4130927.5    89.5      0.60      5.58
2.93     YES
 L0001897         0   0.24802E-03  584223.6 4130938.6    89.4      0.60      5.58
2.93     YES
 L0001898         0   0.24802E-03  584219.2 4130949.8    89.3      0.60      5.58
2.93     YES
 L0001899         0   0.24802E-03  584214.8 4130961.0    89.2      0.60      5.58
2.93     YES
 L0001900         0   0.24802E-03  584212.0 4130972.6    89.0      0.60      5.58
2.93     YES
 L0001901         0   0.24802E-03  584209.2 4130984.3    88.8      0.60      5.58
2.93     YES
 L0001902         0   0.24802E-03  584206.4 4130996.0    88.4      0.60      5.58
2.93     YES
 L0001903         0   0.24802E-03  584203.6 4131007.6    88.2      0.60      5.58
2.93     YES
 L0001904         0   0.24802E-03  584200.8 4131019.3    88.0      0.60      5.58
2.93     YES
 L0001905         0   0.24802E-03  584198.1 4131031.0    87.8      0.60      5.58
2.93     YES
 L0001906         0   0.24802E-03  584195.3 4131042.7    87.6      0.60      5.58
2.93     YES
 L0001907         0   0.24802E-03  584192.5 4131054.3    87.5      0.60      5.58
2.93     YES
 L0001908         0   0.24802E-03  584189.7 4131066.0    87.5      0.60      5.58
2.93     YES
 L0001909         0   0.24802E-03  584186.9 4131077.7    87.5      0.60      5.58
2.93     YES
 L0001910         0   0.24802E-03  584184.2 4131089.4    87.3      0.60      5.58
2.93     YES
 L0001911         0   0.24802E-03  584181.4 4131101.0    87.0      0.60      5.58
2.93     YES
 L0001912         0   0.24802E-03  584178.6 4131112.7    86.9      0.60      5.58
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2.93     YES
 L0001913         0   0.24802E-03  584176.3 4131124.5    86.8     0.60     5.58
2.93     YES
 L0001914         0   0.24802E-03  584174.0 4131136.3    86.8     0.60     5.58
2.93     YES
 L0001915         0   0.24802E-03  584171.8 4131148.0    86.7     0.60     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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- - - - - - - - - - - - - - - - - - - - -

 L0001916         0   0.24802E-03  584169.5 4131159.8    86.7     0.60     5.58
2.93     YES
 L0001917         0   0.24802E-03  584167.2 4131171.6    86.8     0.60     5.58
2.93     YES
 L0001918         0   0.24802E-03  584164.9 4131183.4    86.9     0.60     5.58
2.93     YES
 L0001919         0   0.24802E-03  584162.6 4131195.2    87.1     0.60     5.58
2.93     YES
 L0001920         0   0.24802E-03  584160.3 4131206.9    87.2     0.60     5.58
2.93     YES
 L0001921         0   0.24802E-03  584158.0 4131218.7    87.3     0.60     5.58
2.93     YES
 L0001922         0   0.24802E-03  584155.7 4131230.5    87.3     0.60     5.58
2.93     YES
 L0001923         0   0.24802E-03  584153.5 4131242.3    87.3     0.60     5.58
2.93     YES
 L0001924         0   0.24802E-03  584151.2 4131254.1    87.4     0.60     5.58
2.93     YES
 L0001925         0   0.24802E-03  584148.9 4131265.8    87.5     0.60     5.58
2.93     YES
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 L0001926         0   0.24802E-03  584146.6 4131277.6    87.6      0.60      5.58
2.93     YES
 L0001927         0   0.24802E-03  584144.3 4131289.4    87.8      0.60      5.58
2.93     YES
 L0001928         0   0.24802E-03  584142.0 4131301.2    87.9      0.60      5.58
2.93     YES
 L0001929         0   0.24802E-03  584139.7 4131313.0    88.1      0.60      5.58
2.93     YES
 L0001930         0   0.24802E-03  584137.4 4131324.7    88.4      0.60      5.58
2.93     YES
 L0001931         0   0.24802E-03  584135.1 4131336.5    88.6      0.60      5.58
2.93     YES
 L0001932         0   0.24802E-03  584132.9 4131348.3    88.7      0.60      5.58
2.93     YES
 L0001933         0   0.24802E-03  584130.6 4131360.1    88.8      0.60      5.58
2.93     YES
 L0001934         0   0.24802E-03  584128.3 4131371.9    88.9      0.60      5.58
2.93     YES
 L0001935         0   0.24802E-03  584126.0 4131383.6    89.0      0.60      5.58
2.93     YES
 L0001936         0   0.24802E-03  584123.7 4131395.4    89.2      0.60      5.58
2.93     YES
 L0001937         0   0.24802E-03  584121.4 4131407.2    89.4      0.60      5.58
2.93     YES
 L0001938         0   0.24802E-03  584119.1 4131419.0    89.6      0.60      5.58
2.93     YES
 L0001939         0   0.24802E-03  584116.8 4131430.8    89.8      0.60      5.58
2.93     YES
 L0001940         0   0.24802E-03  584114.6 4131442.5    90.0      0.60      5.58
2.93     YES
 L0001941         0   0.24802E-03  584112.3 4131454.3    90.1      0.60      5.58
2.93     YES
 L0001942         0   0.24802E-03  584109.3 4131465.9    90.2      0.60      5.58
2.93     YES
 L0001943         0   0.24802E-03  584105.6 4131477.3    90.3      0.60      5.58
2.93     YES
 L0001944         0   0.24802E-03  584101.9 4131488.8    90.4      0.60      5.58
2.93     YES
 L0001945         0   0.24802E-03  584098.2 4131500.2    90.5      0.60      5.58
2.93     YES
 L0001946         0   0.24802E-03  584094.6 4131511.6    90.6      0.60      5.58
2.93     YES
 L0001947         0   0.24802E-03  584090.9 4131523.0    90.7      0.60      5.58
2.93     YES
 L0001948         0   0.24802E-03  584087.2 4131534.5    90.9      0.60      5.58
2.93     YES
 L0001949         0   0.24802E-03  584083.5 4131545.9    91.0      0.60      5.58
2.93     YES
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 L0001950         0   0.24802E-03  584079.4 4131557.1    91.1     0.60     5.58
2.93     YES
 L0001951         0   0.24802E-03  584075.0 4131568.3    91.3     0.60     5.58
2.93     YES
 L0001952         0   0.24802E-03  584070.7 4131579.5    91.4     0.60     5.58
2.93     YES
 L0001953         0   0.24802E-03  584066.3 4131590.7    91.5     0.60     5.58
2.93     YES
 L0001954         0   0.24802E-03  584062.0 4131601.9    91.7     0.60     5.58
2.93     YES
 L0001955         0   0.24802E-03  584057.6 4131613.0    91.8     0.60     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   *** 
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   *** 
                        ***        14:15:22

                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                        *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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- - - - - - - - - - - - - - - - - - - - 

 L0001956         0   0.24802E-03  584053.3 4131624.2    92.0     0.60     5.58
2.93     YES
 L0001957         0   0.24802E-03  584048.9 4131635.4    92.0     0.60     5.58
2.93     YES
 L0001958         0   0.24802E-03  584044.6 4131646.6    92.1     0.60     5.58
2.93     YES
 L0001959         0   0.24802E-03  584040.2 4131657.8    92.2     0.60     5.58
2.93     YES
 L0001960         0   0.24802E-03  584035.9 4131669.0    92.4     0.60     5.58
2.93     YES
 L0001961         0   0.24802E-03  584031.2 4131680.0    92.4     0.60     5.58
2.93     YES
 L0001962         0   0.24802E-03  584024.6 4131690.0    92.5     0.60     5.58
2.93     YES
 L0001963         0   0.24802E-03  584017.9 4131700.0    92.5     0.60     5.58
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2.93     YES
 L0001964         0   0.24802E-03  584011.3 4131710.0    92.6     0.60     5.58
2.93     YES
 L0001965         0   0.24802E-03  584004.6 4131719.9    92.6     0.60     5.58
2.93     YES
 L0001966         0   0.24802E-03  583997.9 4131729.9    92.6     0.60     5.58
2.93     YES
 L0001967         0   0.25078E-03  583976.3 4131725.3    91.9     0.60     5.58
3.21     YES
 L0001968         0   0.25078E-03  583983.1 4131715.4    91.9     0.60     5.58
3.21     YES
 L0001969         0   0.25078E-03  583989.9 4131705.5    91.9     0.60     5.58
3.21     YES
 L0001970         0   0.25078E-03  583996.7 4131695.6    92.0     0.60     5.58
3.21     YES
 L0001971         0   0.25078E-03  584003.5 4131685.8    91.7     0.60     5.58
3.21     YES
 L0001972         0   0.25078E-03  584010.2 4131675.9    91.7     0.60     5.58
3.21     YES
 L0001973         0   0.25078E-03  584017.0 4131666.0    91.9     0.60     5.58
3.21     YES
 L0001974         0   0.25078E-03  584023.8 4131656.1    91.9     0.60     5.58
3.21     YES
 L0001975         0   0.25078E-03  584028.5 4131645.1    91.6     0.60     5.58
3.21     YES
 L0001976         0   0.25078E-03  584032.5 4131633.8    91.4     0.60     5.58
3.21     YES
 L0001977         0   0.25078E-03  584036.5 4131622.4    91.3     0.60     5.58
3.21     YES
 L0001978         0   0.25078E-03  584040.5 4131611.1    91.2     0.60     5.58
3.21     YES
 L0001979         0   0.25078E-03  584044.5 4131599.8    91.2     0.60     5.58
3.21     YES
 L0001980         0   0.25078E-03  584048.5 4131588.5    91.1     0.60     5.58
3.21     YES
 L0001981         0   0.25078E-03  584052.5 4131577.2    90.8     0.60     5.58
3.21     YES
 L0001982         0   0.25078E-03  584056.5 4131565.9    90.6     0.60     5.58
3.21     YES
 L0001983         0   0.25078E-03  584060.5 4131554.6    90.4     0.60     5.58
3.21     YES
 L0001984         0   0.25078E-03  584064.5 4131543.2    90.3     0.60     5.58
3.21     YES
 L0001985         0   0.25078E-03  584068.0 4131531.8    90.2     0.60     5.58
3.21     YES
 L0001986         0   0.25078E-03  584071.2 4131520.2    90.0     0.60     5.58
3.21     YES
 L0001987         0   0.25078E-03  584074.3 4131508.6    90.2     0.60     5.58
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3.21     YES
 L0001988         0   0.25078E-03  584077.4 4131497.0    90.0     0.60     5.58
3.21     YES
 L0001989         0   0.25078E-03  584080.6 4131485.5    89.5     0.60     5.58
3.21     YES
 L0001990         0   0.25078E-03  584083.7 4131473.9    89.4     0.60     5.58
3.21     YES
 L0001991         0   0.25078E-03  584086.8 4131462.3    89.3     0.60     5.58
3.21     YES
 L0001992         0   0.25078E-03  584090.0 4131450.7    89.2     0.60     5.58
3.21     YES
 L0001993         0   0.25078E-03  584093.1 4131439.1    89.1     0.60     5.58
3.21     YES
 L0001994         0   0.25078E-03  584096.2 4131427.5    89.0     0.60     5.58
3.21     YES
 L0001995         0   0.25078E-03  584099.3 4131416.0    89.2     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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 L0001996         0   0.25078E-03  584102.5 4131404.4    89.2     0.60     5.58
3.21     YES
 L0001997         0   0.25078E-03  584105.6 4131392.8    89.0     0.60     5.58
3.21     YES
 L0001998         0   0.25078E-03  584108.7 4131381.2    88.9     0.60     5.58
3.21     YES
 L0001999         0   0.25078E-03  584111.1 4131369.4    88.7     0.60     5.58
3.21     YES
 L0002000         0   0.25078E-03  584113.3 4131357.7    88.6     0.60     5.58
3.21     YES
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 L0002001         0   0.25078E-03  584115.6 4131345.9    88.6     0.60     5.58
3.21     YES
 L0002002         0   0.25078E-03  584117.9 4131334.1    88.5     0.60     5.58
3.21     YES
 L0002003         0   0.25078E-03  584120.1 4131322.3    88.5     0.60     5.58
3.21     YES
 L0002004         0   0.25078E-03  584122.4 4131310.5    88.3     0.60     5.58
3.21     YES
 L0002005         0   0.25078E-03  584124.6 4131298.7    88.2     0.60     5.58
3.21     YES
 L0002006         0   0.25078E-03  584126.9 4131286.9    88.0     0.60     5.58
3.21     YES
 L0002007         0   0.25078E-03  584129.1 4131275.2    87.8     0.60     5.58
3.21     YES
 L0002008         0   0.25078E-03  584131.4 4131263.4    87.5     0.60     5.58
3.21     YES
 L0002009         0   0.25078E-03  584133.7 4131251.6    87.4     0.60     5.58
3.21     YES
 L0002010         0   0.25078E-03  584135.9 4131239.8    87.2     0.60     5.58
3.21     YES
 L0002011         0   0.25078E-03  584138.2 4131228.0    87.2     0.60     5.58
3.21     YES
 L0002012         0   0.25078E-03  584140.4 4131216.2    87.1     0.60     5.58
3.21     YES
 L0002013         0   0.25078E-03  584142.8 4131204.5    87.3     0.60     5.58
3.21     YES
 L0002014         0   0.25078E-03  584145.2 4131192.7    87.7     0.60     5.58
3.21     YES
 L0002015         0   0.25078E-03  584147.7 4131181.0    87.8     0.60     5.58
3.21     YES
 L0002016         0   0.25078E-03  584150.1 4131169.2    87.8     0.60     5.58
3.21     YES
 L0002017         0   0.25078E-03  584152.6 4131157.5    87.6     0.60     5.58
3.21     YES
 L0002018         0   0.25078E-03  584155.0 4131145.7    87.2     0.60     5.58
3.21     YES
 L0002019         0   0.25078E-03  584157.5 4131134.0    86.9     0.60     5.58
3.21     YES
 L0002020         0   0.25078E-03  584159.9 4131122.2    87.0     0.60     5.58
3.21     YES
 L0002021         0   0.25078E-03  584162.4 4131110.5    87.0     0.60     5.58
3.21     YES
 L0002022         0   0.25078E-03  584164.8 4131098.7    87.2     0.60     5.58
3.21     YES
 L0002023         0   0.25078E-03  584167.3 4131087.0    87.3     0.60     5.58
3.21     YES
 L0002024         0   0.25078E-03  584169.7 4131075.2    87.8     0.60     5.58
3.21     YES
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 L0002025         0   0.25078E-03  584172.2 4131063.5    88.2     0.60     5.58
3.21     YES
 L0002026         0   0.25078E-03  584174.6 4131051.7    88.4     0.60     5.58
3.21     YES
 L0002027         0   0.25078E-03  584177.1 4131040.0    88.5     0.60     5.58
3.21     YES
 L0002028         0   0.25078E-03  584180.4 4131028.5    88.4     0.60     5.58
3.21     YES
 L0002029         0   0.25078E-03  584183.7 4131016.9    88.3     0.60     5.58
3.21     YES
 L0002030         0   0.25078E-03  584187.1 4131005.4    88.5     0.60     5.58
3.21     YES
 L0002031         0   0.25078E-03  584190.4 4130993.9    88.7     0.60     5.58
3.21     YES
 L0002032         0   0.25078E-03  584193.7 4130982.4    88.9     0.60     5.58
3.21     YES
 L0002033         0   0.25078E-03  584197.1 4130970.8    89.2     0.60     5.58
3.21     YES
 L0002034         0   0.25078E-03  584200.4 4130959.3    89.4     0.60     5.58
3.21     YES
 L0002035         0   0.25078E-03  584203.8 4130947.8    89.6     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
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 L0002036         0   0.25078E-03  584207.1 4130936.2    89.7     0.60     5.58
3.21     YES
 L0002037         0   0.25078E-03  584210.4 4130924.7    89.8     0.60     5.58
3.21     YES
 L0002038         0   0.25078E-03  584213.8 4130913.2    90.0     0.60     5.58
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3.21     YES
 L0002039         0   0.25078E-03  584217.1 4130901.7    90.1      0.60     5.58
3.21     YES
 L0002040         0   0.25078E-03  584220.4 4130890.1    90.3      0.60     5.58
3.21     YES
 L0002041         0   0.25078E-03  584223.8 4130878.6    90.5      0.60     5.58
3.21     YES
 L0002042         0   0.25078E-03  584228.2 4130867.4    90.7      0.60     5.58
3.21     YES
 L0002043         0   0.25078E-03  584232.6 4130856.3    90.8      0.60     5.58
3.21     YES
 L0002044         0   0.25078E-03  584237.0 4130845.1    90.8      0.60     5.58
3.21     YES
 L0002045         0   0.25078E-03  584241.4 4130834.0    90.8      0.60     5.58
3.21     YES
 L0002046         0   0.25078E-03  584245.8 4130822.8    90.8      0.60     5.58
3.21     YES
 L0002047         0   0.25078E-03  584250.2 4130811.6    90.9      0.60     5.58
3.21     YES
 L0002048         0   0.25078E-03  584254.6 4130800.5    91.4      0.60     5.58
3.21     YES
 L0002049         0   0.25078E-03  584259.0 4130789.3    91.1      0.60     5.58
3.21     YES
 L0002050         0   0.25078E-03  584263.4 4130778.2    91.2      0.60     5.58
3.21     YES
 L0002051         0   0.25078E-03  584267.9 4130767.0    91.2      0.60     5.58
3.21     YES
 L0002052         0   0.25078E-03  584272.3 4130755.8    91.3      0.60     5.58
3.21     YES
 L0002053         0   0.25078E-03  584276.7 4130744.7    91.7      0.60     5.58
3.21     YES
 L0002054         0   0.25078E-03  584281.1 4130733.5    91.8      0.60     5.58
3.21     YES
 L0002055         0   0.25078E-03  584285.5 4130722.4    91.5      0.60     5.58
3.21     YES
 L0002056         0   0.25078E-03  584289.9 4130711.2    91.5      0.60     5.58
3.21     YES
 L0001782         0   0.00000E+00  584199.9 4131101.3    89.1      0.60     5.58
3.21     YES
 L0001783         0   0.00000E+00  584211.9 4131101.6    90.6      0.60     5.58
3.21     YES
 L0001784         0   0.00000E+00  584223.9 4131101.9    92.2      0.60     5.58
3.21     YES
 L0001785         0   0.00000E+00  584235.9 4131102.3    93.2      0.60     5.58
3.21     YES
 L0001786         0   0.00000E+00  584247.9 4131102.6    93.0      0.60     5.58
3.21     YES
 L0001787         0   0.00000E+00  584259.9 4131102.9    93.0      0.60     5.58
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3.21     YES
 L0001788         0   0.00000E+00  584271.9 4131103.3    93.2     0.60     5.58
3.21     YES
 L0001789         0   0.00000E+00  584283.9 4131103.6    93.2     0.60     5.58
3.21     YES
 L0001790         0   0.00000E+00  584295.9 4131103.9    93.0     0.60     5.58
3.21     YES
 L0001791         0   0.00000E+00  584307.9 4131104.3    92.6     0.60     5.58
3.21     YES
 L0001792         0   0.00000E+00  584319.9 4131104.6    92.3     0.60     5.58
3.21     YES
 L0001793         0   0.00000E+00  584331.9 4131104.9    92.0     0.60     5.58
3.21     YES
 L0001794         0   0.00000E+00  584343.9 4131105.3    92.0     0.60     5.58
3.21     YES
 L0001795         0   0.00000E+00  584355.9 4131105.6    91.9     0.60     5.58
3.21     YES
 L0001796         0   0.00000E+00  584367.9 4131105.8    91.9     0.60     5.58
3.21     YES
 L0001797         0   0.00000E+00  584379.9 4131106.0    91.9     0.60     5.58
3.21     YES
 L0001798         0   0.00000E+00  584391.9 4131106.2    91.6     0.60     5.58
3.21     YES
 L0001799         0   0.00000E+00  584403.9 4131106.4    91.4     0.60     5.58
3.21     YES
 L0001800         0   0.00000E+00  584415.9 4131106.6    91.3     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                 *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0001801          0   0.00000E+00  584427.9 4131106.8    91.2      0.60      5.58
3.21     YES
 L0001802          0   0.00000E+00  584439.9 4131107.1    91.0      0.60      5.58
3.21     YES
 L0001803          0   0.00000E+00  584451.9 4131107.3    90.9      0.60      5.58
3.21     YES
 L0001804          0   0.00000E+00  584463.9 4131107.5    90.8      0.60      5.58
3.21     YES
 L0001805          0   0.00000E+00  584475.9 4131107.7    90.6      0.60      5.58
3.21     YES
 L0001806          0   0.00000E+00  584487.9 4131107.9    90.2      0.60      5.58
3.21     YES
 L0001807          0   0.00000E+00  584499.9 4131108.1    89.8      0.60      5.58
3.21     YES
 L0001808          0   0.00000E+00  584511.9 4131108.3    89.6      0.60      5.58
3.21     YES
 L0001809          0   0.00000E+00  584523.9 4131108.5    89.4      0.60      5.58
3.21     YES
 L0001810          0   0.00000E+00  584535.9 4131108.7    89.4      0.60      5.58
3.21     YES
 L0001811          0   0.00000E+00  584547.9 4131108.9    89.5      0.60      5.58
3.21     YES
 L0001812          0   0.00000E+00  584559.9 4131109.1    89.4      0.60      5.58
3.21     YES
 L0001813          0   0.00000E+00  584571.9 4131109.3    89.2      0.60      5.58
3.21     YES
 L0001814          0   0.00000E+00  584583.9 4131109.5    89.0      0.60      5.58
3.21     YES
 L0001815          0   0.00000E+00  584595.9 4131109.7    88.8      0.60      5.58
3.21     YES
 L0001816          0   0.00000E+00  584607.9 4131109.9    88.6      0.60      5.58
3.21     YES
 L0001817          0   0.00000E+00  584619.8 4131110.1    88.3      0.60      5.58
3.21     YES
 L0001818          0   0.00000E+00  584631.8 4131110.3    88.1      0.60      5.58
3.21     YES
 L0001819          0   0.00000E+00  584643.8 4131110.5    87.9      0.60      5.58
3.21     YES
 L0001820          0   0.00000E+00  584655.8 4131110.7    87.8      0.60      5.58
3.21     YES
 L0001821          0   0.00000E+00  584667.8 4131110.9    87.7      0.60      5.58
3.21     YES
 L0001822          0   0.00000E+00  584679.8 4131111.1    87.5      0.60      5.58
3.21     YES
 L0001823          0   0.00000E+00  584691.8 4131111.4    87.4      0.60      5.58
3.21     YES
 L0001824          0   0.00000E+00  584703.8 4131111.6    87.3      0.60      5.58
3.21     YES
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 L0001825         0   0.00000E+00  584715.8 4131111.8    87.0     0.60     5.58
3.21     YES
 L0001826         0   0.00000E+00  584727.8 4131112.0    86.7     0.60     5.58
3.21     YES
 L0001827         0   0.00000E+00  584739.8 4131112.2    86.4     0.60     5.58
3.21     YES
 L0001828         0   0.00000E+00  584751.8 4131112.4    86.2     0.60     5.58
3.21     YES
 L0001829         0   0.00000E+00  584749.7 4131127.5    86.1     0.60     5.58
3.21     YES
 L0001830         0   0.00000E+00  584737.7 4131127.3    86.3     0.60     5.58
3.21     YES
 L0001831         0   0.00000E+00  584725.7 4131127.2    86.5     0.60     5.58
3.21     YES
 L0001832         0   0.00000E+00  584713.8 4131127.0    86.7     0.60     5.58
3.21     YES
 L0001833         0   0.00000E+00  584701.8 4131126.9    86.9     0.60     5.58
3.21     YES
 L0001834         0   0.00000E+00  584689.8 4131126.7    87.2     0.60     5.58
3.21     YES
 L0001835         0   0.00000E+00  584677.8 4131126.6    87.4     0.60     5.58
3.21     YES
 L0001836         0   0.00000E+00  584665.8 4131126.5    87.6     0.60     5.58
3.21     YES
 L0001837         0   0.00000E+00  584653.8 4131126.3    87.7     0.60     5.58
3.21     YES
 L0001838         0   0.00000E+00  584641.8 4131126.2    87.9     0.60     5.58
3.21     YES
 L0001839         0   0.00000E+00  584629.8 4131126.0    88.0     0.60     5.58
3.21     YES
 L0001840         0   0.00000E+00  584617.8 4131125.9    88.2     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
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    ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)               BY
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- - - - - - - - - - - - - - - - - - - - -

 L0001841         0   0.00000E+00  584605.8 4131125.7    88.4     0.60     5.58
3.21     YES
 L0001842         0   0.00000E+00  584593.8 4131125.6    88.6     0.60     5.58
3.21     YES
 L0001843         0   0.00000E+00  584581.8 4131125.5    88.8     0.60     5.58
3.21     YES
 L0001844         0   0.00000E+00  584569.8 4131125.3    89.0     0.60     5.58
3.21     YES
 L0001845         0   0.00000E+00  584557.8 4131125.2    89.1     0.60     5.58
3.21     YES
 L0001846         0   0.00000E+00  584545.8 4131125.0    89.2     0.60     5.58
3.21     YES
 L0001847         0   0.00000E+00  584533.8 4131124.9    89.3     0.60     5.58
3.21     YES
 L0001848         0   0.00000E+00  584521.8 4131124.7    89.4     0.60     5.58
3.21     YES
 L0001849         0   0.00000E+00  584509.8 4131124.6    89.6     0.60     5.58
3.21     YES
 L0001850         0   0.00000E+00  584497.8 4131124.5    89.8     0.60     5.58
3.21     YES
 L0001851         0   0.00000E+00  584485.8 4131124.3    90.0     0.60     5.58
3.21     YES
 L0001852         0   0.00000E+00  584473.8 4131124.2    90.2     0.60     5.58
3.21     YES
 L0001853         0   0.00000E+00  584461.8 4131124.0    90.3     0.60     5.58
3.21     YES
 L0001854         0   0.00000E+00  584449.8 4131123.9    90.5     0.60     5.58
3.21     YES
 L0001855         0   0.00000E+00  584437.8 4131123.7    90.7     0.60     5.58
3.21     YES
 L0001856         0   0.00000E+00  584425.8 4131123.6    90.9     0.60     5.58
3.21     YES
 L0001857         0   0.00000E+00  584413.8 4131123.5    91.1     0.60     5.58
3.21     YES
 L0001858         0   0.00000E+00  584401.8 4131123.3    91.2     0.60     5.58
3.21     YES
 L0001859         0   0.00000E+00  584389.8 4131123.2    91.4     0.60     5.58
3.21     YES
 L0001860         0   0.00000E+00  584377.8 4131123.0    91.5     0.60     5.58
3.21     YES
 L0001861         0   0.00000E+00  584365.8 4131123.0    91.7     0.60     5.58
3.21     YES
 L0001862         0   0.00000E+00  584353.8 4131122.9    91.8     0.60     5.58
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3.21     YES
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3.21     YES
 L0001864         0   0.00000E+00  584329.8 4131122.8    92.1     0.60     5.58
3.21     YES
 L0001865         0   0.00000E+00  584317.8 4131122.8    92.3     0.60     5.58
3.21     YES
 L0001866         0   0.00000E+00  584305.8 4131122.7    92.4     0.60     5.58
3.21     YES
 L0001867         0   0.00000E+00  584293.8 4131122.7    92.5     0.60     5.58
3.21     YES
 L0001868         0   0.00000E+00  584281.8 4131122.6    92.6     0.60     5.58
3.21     YES
 L0001869         0   0.00000E+00  584269.8 4131122.6    92.8     0.60     5.58
3.21     YES
 L0001870         0   0.00000E+00  584257.8 4131122.5    92.9     0.60     5.58
3.21     YES
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3.21     YES
 L0001872         0   0.00000E+00  584233.8 4131122.4    93.2     0.60     5.58
3.21     YES
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3.21     YES
 L0001874         0   0.00000E+00  584209.8 4131122.3    91.6     0.60     5.58
3.21     YES
 L0001875         0   0.00000E+00  584197.8 4131122.3    89.8     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                 SOURCE IDs
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  ALL        L0001876    , L0001877    , L0001878    , L0001879    , L0001880    ,
L0001881    , L0001882    , L0001883    ,

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L0001897    , L0001898    , L0001899    ,

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L0001905    , L0001906    , L0001907    ,

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L0001913    , L0001914    , L0001915    ,

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L0001921    , L0001922    , L0001923    ,

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L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   *** 
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                           *** SOURCE IDs DEFINING SOURCE GROUPS 
***

 SRCGROUP ID                                             SOURCE IDs
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             L0002036    , L0002037    , L0002038    , L0002039    , L0002040    ,
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L0001862    , L0001863    , L0001864    ,

             L0001865    , L0001866    , L0001867    , L0001868    , L0001869    ,
L0001870    , L0001871    , L0001872    ,

             L0001873    , L0001874    , L0001875    ,
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                  SOURCE IDs
  --------   ---------                                  ----------


              1918000.   L0001876    , L0001877    , L0001878    , L0001879    ,
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 L0001883    ,

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L0001897    , L0001898    , L0001899    ,

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♀ *** AERMOD - VERSION  18081 ***    ***
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 *** AERMET - VERSION  14134 ***    ***
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                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


             L0002036    , L0002037    , L0002038    , L0002039    , L0002040    ,
L0002041    , L0002042    , L0002043    ,

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♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                      *** DISCRETE CARTESIAN RECEPTORS ***
                                                    (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                  (METERS)

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     ( 584271.4, 4131266.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131266.6,      91.0,      91.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                         ***       14:15:22

                                   PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                    *** DISCRETE CARTESIAN RECEPTORS ***
                                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                 (METERS)

     ( 584211.4, 4131286.6,      91.8,      91.8,       0.0);         ( 584231.4,
4131286.6,      92.5,      92.5,       0.0);
     ( 584251.4, 4131286.6,      92.1,      92.1,       0.0);         ( 584211.4,
4131306.6,      92.6,      92.6,       0.0);
     ( 584231.4, 4131306.6,      92.3,      92.3,       0.0);         ( 584191.4,
4131326.6,      89.8,      92.8,       0.0);
     ( 584211.4, 4131326.6,      92.6,      92.6,       0.0);         ( 584191.4,
4131346.6,      91.0,      91.0,       0.0);
     ( 584171.4, 4131366.6,      91.8,      93.2,       0.0);         ( 584191.4,
4131366.6,      93.0,      93.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                         ***       14:15:22
```

```
                                   PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                   (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                          *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                                (METERS/SEC)

                                                      1.54,   3.09,   5.14,   8.23,
10.80,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                          ***       14:15:22

                                   PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   Met Data\745090.SFC
                 Met Version:  14134
```

```
   Profile file:   Met Data\745090.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:    23244                  Upper air station no.:    23230
                  Name: UNKNOWN                                  Name:
OAKLAND/WSO_AP
                  Year:   2009                                   Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01  -12.1  0.213 -9.000 -9.000 -999.  236.     72.6  0.09   0.54
1.00    2.86    1.   10.0  282.5    2.0
 09 01 01   1 02  -14.9  0.261 -9.000 -9.000 -999.  321.    109.2  0.09   0.54
1.00    3.36   18.   10.0  282.0    2.0
 09 01 01   1 03   -9.1  0.160 -9.000 -9.000 -999.  158.     40.7  0.09   0.54
1.00    2.36   24.   10.0  282.0    2.0
 09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.4    2.0
 09 01 01   1 05   -3.9  0.075 -9.000 -9.000 -999.   49.      9.8  0.09   0.54
1.00    1.76   23.   10.0  281.4    2.0
 09 01 01   1 06   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36    2.   10.0  280.9    2.0
 09 01 01   1 07   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36   15.   10.0  280.9    2.0
 09 01 01   1 08   -4.7  0.084 -9.000 -9.000 -999.   61.     11.7  0.15   0.54
0.73    1.76  323.   10.0  280.9    2.0
 09 01 01   1 09   -4.9  0.212 -9.000 -9.000 -999.  234.    179.0  0.15   0.54
0.38    2.36  357.   10.0  280.4    2.0
 09 01 01   1 10    5.7  0.163  0.241  0.014   89.  159.    -69.3  0.09   0.54
0.25    1.76   11.   10.0  280.9    2.0
 09 01 01   1 11   12.2 -9.000 -9.000 -9.000  158. -999. -99999.0  0.24   0.54
0.21    0.00    0.   10.0  280.9    2.0
 09 01 01   1 12   16.0  0.426  0.456  0.016  216.  668.   -442.4  0.15   0.54
0.19    4.36  346.   10.0  281.4    2.0
 09 01 01   1 13   16.6  0.236  0.493  0.015  263.  305.    -71.8  0.36   0.54
0.19    1.76  253.   10.0  281.4    2.0
 09 01 01   1 14   14.2 -9.000 -9.000 -9.000  297. -999. -99999.0  0.24   0.54
0.20    0.00    0.   10.0  282.0    2.0
 09 01 01   1 15   44.9 -9.000 -9.000 -9.000  387. -999. -99999.0  0.24   0.54
0.23    0.00    0.   10.0  283.8    2.0
 09 01 01   1 16   13.2 -9.000 -9.000 -9.000  410. -999. -99999.0  0.24   0.54
0.31    0.00    0.   10.0  284.1    2.0
```

```
 09 01 01   1 17  -12.3  0.130 -9.000 -9.000 -999.  112.     16.2  0.15   0.54
0.55    2.36  351.   10.0  282.1    2.0
 09 01 01   1 18   -9.3  0.106 -9.000 -9.000 -999.   83.     11.6  0.36   0.54
1.00    1.76  297.   10.0  282.1    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  280.1    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 09 01 01 01   10.0 1    1.    2.86   282.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                            **
```

```
       X-COORD (M)   Y-COORD (M)        CONC                           X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         584291.38    4131146.65        0.56023                          584311.38
4131146.65        0.47949
         584331.38    4131146.65        0.41678                          584351.38
4131146.65        0.36701
         584371.38    4131146.65        0.32614                          584391.38
4131146.65        0.29191
         584411.38    4131146.65        0.26299                          584431.38
4131146.65        0.23836
         584451.38    4131146.65        0.21718                          584471.38
4131146.65        0.19863
         584491.38    4131146.65        0.18245                          584511.38
4131146.65        0.16817
         584231.38    4131166.65        0.99641                          584251.38
4131166.65        0.78073
         584271.38    4131166.65        0.64123                          584291.38
4131166.65        0.54020
         584311.38    4131166.65        0.46342                          584331.38
4131166.65        0.40345
         584351.38    4131166.65        0.35575                          584371.38
4131166.65        0.31647
         584391.38    4131166.65        0.28365                          584411.38
4131166.65        0.25587
         584431.38    4131166.65        0.23212                          584451.38
4131166.65        0.21167
         584471.38    4131166.65        0.19373                          584491.38
4131166.65        0.17809
         584511.38    4131166.65        0.16427                          584231.38
4131186.65        0.94688
         584251.38    4131186.65        0.74779                          584271.38
4131186.65        0.61604
         584291.38    4131186.65        0.52045                          584311.38
4131186.65        0.44754
         584331.38    4131186.65        0.39029                          584351.38
4131186.65        0.34455
         584371.38    4131186.65        0.30678                          584391.38
4131186.65        0.27537
         584411.38    4131186.65        0.24872                          584431.38
4131186.65        0.22585
         584451.38    4131186.65        0.20613                          584471.38
4131186.65        0.18883
         584491.38    4131186.65        0.17371                          584511.38
4131186.65        0.16033
         584231.38    4131206.65        0.87711                          584251.38
```

```
4131206.65        0.71341
         584271.38    4131206.65        0.59113                            584291.38
4131206.65        0.50088
         584311.38    4131206.65        0.43186                            584331.38
4131206.65        0.37759
         584351.38    4131206.65        0.33369                            584371.38
4131206.65        0.29744
         584391.38    4131206.65        0.26719                            584411.38
4131206.65        0.24156
         584431.38    4131206.65        0.21959                            584451.38
4131206.65        0.20058
         584471.38    4131206.65        0.18392                            584491.38
4131206.65        0.16930
         584211.38    4131226.65        1.12624                            584231.38
4131226.65        0.82739
         584251.38    4131226.65        0.68021                            584271.38
4131226.65        0.56713
         584291.38    4131226.65        0.48220                            584311.38
4131226.65        0.41677
         584331.38    4131226.65        0.36504                            584351.38
4131226.65        0.32298
         584371.38    4131226.65        0.28826                            584391.38
4131226.65        0.25914
         584411.38    4131226.65        0.23445                            584431.38
4131226.65        0.21332
         584451.38    4131226.65        0.19502                            584471.38
4131226.65        0.17897
         584491.38    4131226.65        0.16485                            584211.38
4131246.65        1.06103
         584231.38    4131246.65        0.78697                            584251.38
4131246.65        0.64908
         584271.38    4131246.65        0.54389                            584291.38
4131246.65        0.46406
         584311.38    4131246.65        0.40203                            584331.38
4131246.65        0.35261
         584351.38    4131246.65        0.31234                            584371.38
4131246.65        0.27911
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                       *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
```

```
                              Westport_SR-85_TOG.ADO
                                 INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
               L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
               L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
               L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         584391.38    4131246.65        0.25114                       584411.38
4131246.65        0.22739
         584431.38    4131246.65        0.20707                       584451.38
4131246.65        0.18945
         584471.38    4131246.65        0.17400                       584211.38
4131266.65        0.98966
         584231.38    4131266.65        0.74589                       584251.38
4131266.65        0.62030
         584271.38    4131266.65        0.52145                       584291.38
4131266.65        0.44633
         584211.38    4131286.65        0.92316                       584231.38
4131286.65        0.71335
         584251.38    4131286.65        0.59037                       584211.38
4131306.65        0.85247
         584231.38    4131306.65        0.68419                       584191.38
4131326.65        1.10699
         584211.38    4131326.65        0.80638                       584191.38
4131346.65        1.02279
         584171.38    4131366.65        1.31685                       584191.38
4131366.65        0.92159
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

```
                                   Westport_SR-85_TOG.ADO
                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
               L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
               L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
               L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584291.38   4131146.65        2.88967  (13021518)                584311.38
 4131146.65        2.58732  (09022019)
        584331.38   4131146.65        2.32610  (09022019)                584351.38
 4131146.65        2.10141  (13122718)
        584371.38   4131146.65        1.93600  (13122718)                584391.38
 4131146.65        1.79035  (11011719)
        584411.38   4131146.65        1.64932  (11011719)                584431.38
 4131146.65        1.54137  (11122419)
        584451.38   4131146.65        1.45450  (11020602)                584471.38
 4131146.65        1.37589  (11020602)
        584491.38   4131146.65        1.29317  (11020602)                584511.38
 4131146.65        1.21659  (09012018)
        584231.38   4131166.65        4.47163  (11012418)                584251.38
 4131166.65        3.69205  (11012519)
        584271.38   4131166.65        3.20990  (13021720)                584291.38
 4131166.65        2.83843  (13021518)
        584311.38   4131166.65        2.53567  (09022019)                584331.38
 4131166.65        2.26511  (12120317)
        584351.38   4131166.65        2.07136  (13122718)                584371.38
 4131166.65        1.90265  (11011719)
        584391.38   4131166.65        1.75232  (11011719)                584411.38
 4131166.65        1.62164  (11122419)
        584431.38   4131166.65        1.52503  (11020602)                584451.38
 4131166.65        1.43983  (11020602)
        584471.38   4131166.65        1.35121  (11020602)                584491.38
 4131166.65        1.26676  (09012018)
        584511.38   4131166.65        1.20730  (09012018)                584231.38
```

```
4131186.65        4.31572  (11012418)
        584251.38   4131186.65        3.60091  (09020107)                   584271.38
4131186.65        3.13296  (13021518)
        584291.38   4131186.65        2.77522  (09022019)                   584311.38
4131186.65        2.46692  (12120317)
        584331.38   4131186.65        2.22261  (13122718)                   584351.38
4131186.65        2.02734  (11011719)
        584371.38   4131186.65        1.86592  (11011719)                   584391.38
4131186.65        1.71001  (11122419)
        584411.38   4131186.65        1.60329  (11122419)                   584431.38
4131186.65        1.51007  (11020602)
        584451.38   4131186.65        1.41369  (11020602)                   584471.38
4131186.65        1.32072  (09012018)
        584491.38   4131186.65        1.25641  (09012018)                   584511.38
4131186.65        1.19074  (11011718)
        584231.38   4131206.65        4.08269  (11012519)                   584251.38
4131206.65        3.51090  (13021720)
        584271.38   4131206.65        3.06352  (13021518)                   584291.38
4131206.65        2.70532  (09022019)
        584311.38   4131206.65        2.39508  (13122718)                   584331.38
4131206.65        2.17861  (13122718)
        584351.38   4131206.65        1.99293  (11011719)                   584371.38
4131206.65        1.81320  (13020619)
        584391.38   4131206.65        1.69191  (11122419)                   584411.38
4131206.65        1.58702  (11020602)
        584431.38   4131206.65        1.48284  (11020602)                   584451.38
4131206.65        1.37861  (09012018)
        584471.38   4131206.65        1.30858  (09012018)                   584491.38
4131206.65        1.23730  (11011718)
        584211.38   4131226.65        4.96735  (11012418)                   584231.38
4131226.65        3.92502  (09020107)
        584251.38   4131226.65        3.41060  (13021518)                   584271.38
4131226.65        2.98699  (09022019)
        584291.38   4131226.65        2.62129  (12120317)                   584311.38
4131226.65        2.35401  (13122718)
        584331.38   4131226.65        2.13580  (11011719)                   584351.38
4131226.65        1.93741  (11011719)
        584371.38   4131226.65        1.79039  (11122419)                   584391.38
4131226.65        1.67193  (11020602)
        584411.38   4131226.65        1.55851  (11020602)                   584431.38
4131226.65        1.44291  (09012018)
        584451.38   4131226.65        1.36485  (09012018)                   584471.38
4131226.65        1.28749  (11011718)
        584491.38   4131226.65        1.20583  (11011718)                   584211.38
4131246.65        4.73775  (11012519)
        584231.38   4131246.65        3.82166  (13021720)                   584251.38
4131246.65        3.31840  (13021518)
        584271.38   4131246.65        2.89448  (09022019)                   584291.38
```

```
 4131246.65        2.55515  (13122718)
       584311.38   4131246.65        2.29801  (11011719)                584331.38
 4131246.65        2.08135  (11011719)
       584351.38   4131246.65        1.90064  (11122419)                584371.38
 4131246.65        1.76629  (11020602)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                     **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584391.38   4131246.65        1.64174  (11020602)                584411.38
 4131246.65        1.51289  (09012018)
       584431.38   4131246.65        1.42796  (09012018)                584451.38
 4131246.65        1.34112  (11011718)
       584471.38   4131246.65        1.25270  (11011718)                584211.38
 4131266.65        4.52518  (09020107)
       584231.38   4131266.65        3.69557  (13021518)                584251.38
 4131266.65        3.22536  (09022019)
       584271.38   4131266.65        2.78903  (12120317)                584291.38
 4131266.65        2.49266  (13122718)
       584211.38   4131286.65        4.34065  (13021720)                584231.38
 4131286.65        3.60089  (09022019)
       584251.38   4131286.65        3.10069  (12120317)                584211.38
```

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 4131306.65        4.12943  (13021518)
       584231.38   4131306.65        3.50154  (09022019)                584191.38
 4131326.65        4.99794  (13021720)
       584211.38   4131326.65        3.98766  (09022019)                584191.38
 4131346.65        4.75847  (13021518)
       584171.38   4131366.65        5.77793  (13021720)                584191.38
 4131366.65        4.45207  (09022019)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                       ***        14:15:22

                                  PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
              L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
              L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
              L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)               X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584291.38   4131146.65        1.16433c (09010824)                584311.38
 4131146.65        1.02333c (09010824)
       584331.38   4131146.65        0.91508c (09010824)                584351.38
 4131146.65        0.82910c (09010824)
       584371.38   4131146.65        0.75777c (09010824)                584391.38
 4131146.65        0.69678c (09010824)
       584411.38   4131146.65        0.64342c (09010824)                584431.38
 4131146.65        0.59561c (09010824)
       584451.38   4131146.65        0.55195c (09010824)                584471.38
 4131146.65        0.51125c (09010824)
       584491.38   4131146.65        0.47338c (09010824)                584511.38
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4131146.65        0.43794c (09010824)
       584231.38   4131166.65        1.90144c (09010824)                584251.38
4131166.65        1.54672c (09010824)
       584271.38   4131166.65        1.30982c (09010824)                584291.38
4131166.65        1.13374c (09010824)
       584311.38   4131166.65        1.00071c (09010824)                584331.38
4131166.65        0.89759c (09010824)
       584351.38   4131166.65        0.81498c (09010824)                584371.38
4131166.65        0.74565c (09010824)
       584391.38   4131166.65        0.68583c (09010824)                584411.38
4131166.65        0.63277c (09010824)
       584431.38   4131166.65        0.58463c (09010824)                584451.38
4131166.65        0.54038c (09010824)
       584471.38   4131166.65        0.49902c (09010824)                584491.38
4131166.65        0.46066c (09010824)
       584511.38   4131166.65        0.42493c (09010824)                584231.38
4131186.65        1.82624c (09010824)
       584251.38   4131186.65        1.49633c (09010824)                584271.38
4131186.65        1.27076c (09010824)
       584291.38   4131186.65        1.10480c (09010824)                584311.38
4131186.65        0.97933c (09010824)
       584331.38   4131186.65        0.88091c (09010824)                584351.38
4131186.65        0.80099c (09010824)
       584371.38   4131186.65        0.73305c (09010824)                584391.38
4131186.65        0.67385c (09010824)
       584411.38   4131186.65        0.62070c (09010824)                584431.38
4131186.65        0.57201c (09010824)
       584451.38   4131186.65        0.52708c (09010824)                584471.38
4131186.65        0.48521c (09010824)
       584491.38   4131186.65        0.44655c (09010824)                584511.38
4131186.65        0.41084c (09010824)
       584231.38   4131206.65        1.70933c (09010824)                584251.38
4131206.65        1.44246c (09010824)
       584271.38   4131206.65        1.23319c (09010824)                584291.38
4131206.65        1.07747c (09010824)
       584311.38   4131206.65        0.95902c (09010824)                584331.38
4131206.65        0.86506c (09010824)
       584351.38   4131206.65        0.78704c (09010824)                584371.38
4131206.65        0.71989c (09010824)
       584391.38   4131206.65        0.66056c (09010824)                584411.38
4131206.65        0.60685c (09010824)
       584431.38   4131206.65        0.55754c (09010824)                584451.38
4131206.65        0.51197c (09010824)
       584471.38   4131206.65        0.46985c (09010824)                584491.38
4131206.65        0.43116c (09010824)
       584211.38   4131226.65        2.13538c (09010824)                584231.38
4131226.65        1.63570c (09010824)
       584251.38   4131226.65        1.39267c (09010824)                584271.38
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 4131226.65        1.19870c (09010824)
       584291.38   4131226.65        1.05258c (09010824)                584311.38
 4131226.65        0.93998c (09010824)
       584331.38   4131226.65        0.84907c (09010824)                584351.38
 4131226.65        0.77232c (09010824)
       584371.38   4131226.65        0.70544c (09010824)                584391.38
 4131226.65        0.64554c (09010824)
       584411.38   4131226.65        0.59103c (09010824)                584431.38
 4131226.65        0.54109c (09010824)
       584451.38   4131226.65        0.49511c (09010824)                584471.38
 4131226.65        0.45307c (09010824)
       584491.38   4131226.65        0.41758b (13120324)                584211.38
 4131246.65        2.03578c (09010824)
       584231.38   4131246.65        1.57150c (09010824)                584251.38
 4131246.65        1.34702c (09010824)
       584271.38   4131246.65        1.16678c (09010824)                584291.38
 4131246.65        1.02920c (09010824)
       584311.38   4131246.65        0.92123c (09010824)                584331.38
 4131246.65        0.83233c (09010824)
       584351.38   4131246.65        0.75615c (09010824)                584371.38
 4131246.65        0.68902c (09010824)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
              L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
              L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
              L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
```

```
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584391.38   4131246.65        0.62832c (09010824)                584411.38
 4131246.65        0.57308c (09010824)
        584431.38   4131246.65        0.52275c (09010824)                584451.38
 4131246.65        0.47672c (09010824)
        584471.38   4131246.65        0.43757b (13120324)                584211.38
 4131266.65        1.92248c (09010824)
        584231.38   4131266.65        1.50943c (09010824)                584251.38
 4131266.65        1.30672c (09010824)
        584271.38   4131266.65        1.13697c (09010824)                584291.38
 4131266.65        1.00651c (09010824)
        584211.38   4131286.65        1.81914c (09010824)                584231.38
 4131286.65        1.46947c (09010824)
        584251.38   4131286.65        1.26489c (09010824)                584211.38
 4131306.65        1.70824c (09010824)
        584231.38   4131306.65        1.43435c (09010824)                584191.38
 4131326.65        2.15211c (09010824)
        584211.38   4131326.65        1.64535c (09010824)                584191.38
 4131346.65        2.02258c (09010824)
        584171.38   4131366.65        2.51033c (09010824)                584191.38
 4131366.65        1.85637c (09010824)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***



                                    ** CONC OF TOG      IN MICROGRAMS/M**3
                **




                         NETWORK
GROUP ID                       AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -


ALL       1ST HIGHEST VALUE IS       1.31685 AT (  584171.38,  4131366.65,
91.85,    93.20,    0.00)  DC
```

```
          2ND HIGHEST VALUE IS       1.12624 AT (  584211.38,  4131226.65,
89.90,    92.59,    0.00)  DC
          3RD HIGHEST VALUE IS       1.10699 AT (  584191.38,  4131326.65,
89.79,    92.75,    0.00)  DC
          4TH HIGHEST VALUE IS       1.06103 AT (  584211.38,  4131246.65,
89.65,    92.53,    0.00)  DC
          5TH HIGHEST VALUE IS       1.02279 AT (  584191.38,  4131346.65,
91.03,    91.03,    0.00)  DC
          6TH HIGHEST VALUE IS       0.99641 AT (  584231.38,  4131166.65,
91.39,    91.39,    0.00)  DC
          7TH HIGHEST VALUE IS       0.98966 AT (  584211.38,  4131266.65,
90.78,    92.76,    0.00)  DC
          8TH HIGHEST VALUE IS       0.94688 AT (  584231.38,  4131186.65,
91.07,    91.07,    0.00)  DC
          9TH HIGHEST VALUE IS       0.92316 AT (  584211.38,  4131286.65,
91.79,    91.79,    0.00)  DC
         10TH HIGHEST VALUE IS       0.92159 AT (  584191.38,  4131366.65,
92.99,    92.99,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                        *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF TOG      IN MICROGRAMS/M**3
                **

                                                                  DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
- - - - - - - - - - - - - - - - - - - - - - - - 

ALL      HIGH   1ST HIGH VALUE IS       5.77793  ON 13021720: AT (  584171.38,
```

```
4131366.65,    91.85,    93.20,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                    *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF TOG      IN MICROGRAMS/M**3
                **

                                                              DATE
                                                NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       2.51033c ON 09010824: AT (  584171.38,
4131366.65,    91.85,    93.20,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_TOG\Westport_SR-85_TOG.i ***
08/20/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        14:15:22

                                   PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

 *** Message Summary : AERMOD Model Execution ***
```

```
 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of           95 Warning Message(s)
A Total of        15496 Informational Message(s)

A Total of        43872 Hours Were Processed

A Total of        14061 Calm Hours Identified

A Total of         1435 Missing Hours Identified (  3.27 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     571        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     572        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     573        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     574        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     575        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     576        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     577        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     578        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     579        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     580        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     581        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     582        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     583        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     584        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     585        VPARM: Input Parameter May Be Out-of-Range for Parameter
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       QS
SO W320     586         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     587         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     588         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     589         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     590         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     591         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     592         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     593         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     594         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     595         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     596         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     597         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     598         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     599         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     600         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     601         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     602         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     603         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     604         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     605         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     606         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     607         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     608         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     609         VPARM: Input Parameter May Be Out-of-Range for Parameter
```

```
       QS
SO W320     610        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     611        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     612        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     613        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     614        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     615        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     616        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     617        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     620        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     621        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     622        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     623        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     624        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     625        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     626        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     627        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     628        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     629        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     630        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     631        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     632        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     633        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     634        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     635        VPARM: Input Parameter May Be Out-of-Range for Parameter
```

```
       QS
SO W320     636        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     637        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     638        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     639        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     640        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     641        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     642        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     643        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     644        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     645        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     646        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     647        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     648        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     649        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     650        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     651        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     652        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     653        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     654        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     655        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     656        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     657        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     658        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     659        VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320     660        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     661        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     662        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     663        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     664        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     665        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     666        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
MX W481   43873         MAIN: Data Remaining After End of Year. Number of Hours=
       48

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
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**
***************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/18/2018
** File:
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_StevensCrk_PM.ADI
**
***************************************
**
**
***************************************
** AERMOD Control Pathway
***************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL Westport_StevensCrk_PM.err
CO FINISHED
**
***************************************
** AERMOD Source Pathway
***************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
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** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001876     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001903     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001904     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
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LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001947     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
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   LOCATION L0001965     VOLUME   584004.604 4131719.942 92.58
   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
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** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0001967     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
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LOCATION L0001992     VOLUME   584089.956 4131450.711 89.21
LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002012     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002024     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002026     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
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   LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00001491
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 4.15, 5.58
** 584356.298, 4131105.625, 91.89, 4.15, 5.58
** 584754.237, 4131112.421, 86.16, 4.15, 5.58
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   LOCATION L0002057     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0002058     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0002059     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0002060     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0002061     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0002062     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0002063     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0002064     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0002065     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0002066     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0002067     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0002068     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0002069     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0002070     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0002071     VOLUME   584367.886 4131105.823 91.93
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   LOCATION L0002072     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0002073     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0002074     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0002075     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0002076     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0002077     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0002078     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0002079     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0002080     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0002081     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0002082     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0002083     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0002084     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0002085     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0002086     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0002087     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0002088     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0002089     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0002090     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0002091     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0002092     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0002093     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0002094     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0002095     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0002096     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0002097     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0002098     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0002099     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0002100     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0002101     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0002102     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0002103     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00001491
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 4.15, 5.58
** 584374.420, 4131122.992, 91.63, 4.15, 5.58
** 584190.176, 4131122.237, 90.97, 4.15, 5.58
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   LOCATION L0002104     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0002105     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0002106     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0002107     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0002108     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0002109     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0002110     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0002111     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0002112     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0002113     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0002114     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0002115     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0002116     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0002117     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0002118     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0002119     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0002120     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0002121     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0002122     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0002123     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0002124     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0002125     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0002126     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0002127     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0002128     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0002129     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0002130     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0002131     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0002132     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0002133     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0002134     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0002135     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0002136     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0002137     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0002138     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0002139     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0002140     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0002141     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0002142     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0002143     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0002144     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0002145     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0002146     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0002147     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0002148     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0002149     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0002150     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
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** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001876           0.0      4.15      5.58      2.93
   SRCPARAM L0001877           0.0      4.15      5.58      2.93
   SRCPARAM L0001878           0.0      4.15      5.58      2.93
   SRCPARAM L0001879           0.0      4.15      5.58      2.93
   SRCPARAM L0001880           0.0      4.15      5.58      2.93
   SRCPARAM L0001881           0.0      4.15      5.58      2.93
   SRCPARAM L0001882           0.0      4.15      5.58      2.93
   SRCPARAM L0001883           0.0      4.15      5.58      2.93
   SRCPARAM L0001884           0.0      4.15      5.58      2.93
   SRCPARAM L0001885           0.0      4.15      5.58      2.93
   SRCPARAM L0001886           0.0      4.15      5.58      2.93
   SRCPARAM L0001887           0.0      4.15      5.58      2.93
   SRCPARAM L0001888           0.0      4.15      5.58      2.93
   SRCPARAM L0001889           0.0      4.15      5.58      2.93
   SRCPARAM L0001890           0.0      4.15      5.58      2.93
   SRCPARAM L0001891           0.0      4.15      5.58      2.93
   SRCPARAM L0001892           0.0      4.15      5.58      2.93
   SRCPARAM L0001893           0.0      4.15      5.58      2.93
   SRCPARAM L0001894           0.0      4.15      5.58      2.93
   SRCPARAM L0001895           0.0      4.15      5.58      2.93
   SRCPARAM L0001896           0.0      4.15      5.58      2.93
   SRCPARAM L0001897           0.0      4.15      5.58      2.93
   SRCPARAM L0001898           0.0      4.15      5.58      2.93
   SRCPARAM L0001899           0.0      4.15      5.58      2.93
   SRCPARAM L0001900           0.0      4.15      5.58      2.93
   SRCPARAM L0001901           0.0      4.15      5.58      2.93
   SRCPARAM L0001902           0.0      4.15      5.58      2.93
   SRCPARAM L0001903           0.0      4.15      5.58      2.93
   SRCPARAM L0001904           0.0      4.15      5.58      2.93
   SRCPARAM L0001905           0.0      4.15      5.58      2.93
   SRCPARAM L0001906           0.0      4.15      5.58      2.93
   SRCPARAM L0001907           0.0      4.15      5.58      2.93
   SRCPARAM L0001908           0.0      4.15      5.58      2.93
   SRCPARAM L0001909           0.0      4.15      5.58      2.93
   SRCPARAM L0001910           0.0      4.15      5.58      2.93
   SRCPARAM L0001911           0.0      4.15      5.58      2.93
   SRCPARAM L0001912           0.0      4.15      5.58      2.93
   SRCPARAM L0001913           0.0      4.15      5.58      2.93
   SRCPARAM L0001914           0.0      4.15      5.58      2.93
   SRCPARAM L0001915           0.0      4.15      5.58      2.93
   SRCPARAM L0001916           0.0      4.15      5.58      2.93
   SRCPARAM L0001917           0.0      4.15      5.58      2.93
   SRCPARAM L0001918           0.0      4.15      5.58      2.93
   SRCPARAM L0001919           0.0      4.15      5.58      2.93
   SRCPARAM L0001920           0.0      4.15      5.58      2.93
   SRCPARAM L0001921           0.0      4.15      5.58      2.93
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   SRCPARAM L0001922           0.0      4.15      5.58      2.93
   SRCPARAM L0001923           0.0      4.15      5.58      2.93
   SRCPARAM L0001924           0.0      4.15      5.58      2.93
   SRCPARAM L0001925           0.0      4.15      5.58      2.93
   SRCPARAM L0001926           0.0      4.15      5.58      2.93
   SRCPARAM L0001927           0.0      4.15      5.58      2.93
   SRCPARAM L0001928           0.0      4.15      5.58      2.93
   SRCPARAM L0001929           0.0      4.15      5.58      2.93
   SRCPARAM L0001930           0.0      4.15      5.58      2.93
   SRCPARAM L0001931           0.0      4.15      5.58      2.93
   SRCPARAM L0001932           0.0      4.15      5.58      2.93
   SRCPARAM L0001933           0.0      4.15      5.58      2.93
   SRCPARAM L0001934           0.0      4.15      5.58      2.93
   SRCPARAM L0001935           0.0      4.15      5.58      2.93
   SRCPARAM L0001936           0.0      4.15      5.58      2.93
   SRCPARAM L0001937           0.0      4.15      5.58      2.93
   SRCPARAM L0001938           0.0      4.15      5.58      2.93
   SRCPARAM L0001939           0.0      4.15      5.58      2.93
   SRCPARAM L0001940           0.0      4.15      5.58      2.93
   SRCPARAM L0001941           0.0      4.15      5.58      2.93
   SRCPARAM L0001942           0.0      4.15      5.58      2.93
   SRCPARAM L0001943           0.0      4.15      5.58      2.93
   SRCPARAM L0001944           0.0      4.15      5.58      2.93
   SRCPARAM L0001945           0.0      4.15      5.58      2.93
   SRCPARAM L0001946           0.0      4.15      5.58      2.93
   SRCPARAM L0001947           0.0      4.15      5.58      2.93
   SRCPARAM L0001948           0.0      4.15      5.58      2.93
   SRCPARAM L0001949           0.0      4.15      5.58      2.93
   SRCPARAM L0001950           0.0      4.15      5.58      2.93
   SRCPARAM L0001951           0.0      4.15      5.58      2.93
   SRCPARAM L0001952           0.0      4.15      5.58      2.93
   SRCPARAM L0001953           0.0      4.15      5.58      2.93
   SRCPARAM L0001954           0.0      4.15      5.58      2.93
   SRCPARAM L0001955           0.0      4.15      5.58      2.93
   SRCPARAM L0001956           0.0      4.15      5.58      2.93
   SRCPARAM L0001957           0.0      4.15      5.58      2.93
   SRCPARAM L0001958           0.0      4.15      5.58      2.93
   SRCPARAM L0001959           0.0      4.15      5.58      2.93
   SRCPARAM L0001960           0.0      4.15      5.58      2.93
   SRCPARAM L0001961           0.0      4.15      5.58      2.93
   SRCPARAM L0001962           0.0      4.15      5.58      2.93
   SRCPARAM L0001963           0.0      4.15      5.58      2.93
   SRCPARAM L0001964           0.0      4.15      5.58      2.93
   SRCPARAM L0001965           0.0      4.15      5.58      2.93
   SRCPARAM L0001966           0.0      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001967           0.0      4.15      5.58      3.21
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SRCPARAM L0001968           0.0      4.15      5.58      3.21
SRCPARAM L0001969           0.0      4.15      5.58      3.21
SRCPARAM L0001970           0.0      4.15      5.58      3.21
SRCPARAM L0001971           0.0      4.15      5.58      3.21
SRCPARAM L0001972           0.0      4.15      5.58      3.21
SRCPARAM L0001973           0.0      4.15      5.58      3.21
SRCPARAM L0001974           0.0      4.15      5.58      3.21
SRCPARAM L0001975           0.0      4.15      5.58      3.21
SRCPARAM L0001976           0.0      4.15      5.58      3.21
SRCPARAM L0001977           0.0      4.15      5.58      3.21
SRCPARAM L0001978           0.0      4.15      5.58      3.21
SRCPARAM L0001979           0.0      4.15      5.58      3.21
SRCPARAM L0001980           0.0      4.15      5.58      3.21
SRCPARAM L0001981           0.0      4.15      5.58      3.21
SRCPARAM L0001982           0.0      4.15      5.58      3.21
SRCPARAM L0001983           0.0      4.15      5.58      3.21
SRCPARAM L0001984           0.0      4.15      5.58      3.21
SRCPARAM L0001985           0.0      4.15      5.58      3.21
SRCPARAM L0001986           0.0      4.15      5.58      3.21
SRCPARAM L0001987           0.0      4.15      5.58      3.21
SRCPARAM L0001988           0.0      4.15      5.58      3.21
SRCPARAM L0001989           0.0      4.15      5.58      3.21
SRCPARAM L0001990           0.0      4.15      5.58      3.21
SRCPARAM L0001991           0.0      4.15      5.58      3.21
SRCPARAM L0001992           0.0      4.15      5.58      3.21
SRCPARAM L0001993           0.0      4.15      5.58      3.21
SRCPARAM L0001994           0.0      4.15      5.58      3.21
SRCPARAM L0001995           0.0      4.15      5.58      3.21
SRCPARAM L0001996           0.0      4.15      5.58      3.21
SRCPARAM L0001997           0.0      4.15      5.58      3.21
SRCPARAM L0001998           0.0      4.15      5.58      3.21
SRCPARAM L0001999           0.0      4.15      5.58      3.21
SRCPARAM L0002000           0.0      4.15      5.58      3.21
SRCPARAM L0002001           0.0      4.15      5.58      3.21
SRCPARAM L0002002           0.0      4.15      5.58      3.21
SRCPARAM L0002003           0.0      4.15      5.58      3.21
SRCPARAM L0002004           0.0      4.15      5.58      3.21
SRCPARAM L0002005           0.0      4.15      5.58      3.21
SRCPARAM L0002006           0.0      4.15      5.58      3.21
SRCPARAM L0002007           0.0      4.15      5.58      3.21
SRCPARAM L0002008           0.0      4.15      5.58      3.21
SRCPARAM L0002009           0.0      4.15      5.58      3.21
SRCPARAM L0002010           0.0      4.15      5.58      3.21
SRCPARAM L0002011           0.0      4.15      5.58      3.21
SRCPARAM L0002012           0.0      4.15      5.58      3.21
SRCPARAM L0002013           0.0      4.15      5.58      3.21
SRCPARAM L0002014           0.0      4.15      5.58      3.21
SRCPARAM L0002015           0.0      4.15      5.58      3.21
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   SRCPARAM L0002016           0.0      4.15      5.58      3.21
   SRCPARAM L0002017           0.0      4.15      5.58      3.21
   SRCPARAM L0002018           0.0      4.15      5.58      3.21
   SRCPARAM L0002019           0.0      4.15      5.58      3.21
   SRCPARAM L0002020           0.0      4.15      5.58      3.21
   SRCPARAM L0002021           0.0      4.15      5.58      3.21
   SRCPARAM L0002022           0.0      4.15      5.58      3.21
   SRCPARAM L0002023           0.0      4.15      5.58      3.21
   SRCPARAM L0002024           0.0      4.15      5.58      3.21
   SRCPARAM L0002025           0.0      4.15      5.58      3.21
   SRCPARAM L0002026           0.0      4.15      5.58      3.21
   SRCPARAM L0002027           0.0      4.15      5.58      3.21
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   SRCPARAM L0002029           0.0      4.15      5.58      3.21
   SRCPARAM L0002030           0.0      4.15      5.58      3.21
   SRCPARAM L0002031           0.0      4.15      5.58      3.21
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   SRCPARAM L0002033           0.0      4.15      5.58      3.21
   SRCPARAM L0002034           0.0      4.15      5.58      3.21
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   SRCPARAM L0002037           0.0      4.15      5.58      3.21
   SRCPARAM L0002038           0.0      4.15      5.58      3.21
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   SRCPARAM L0002042           0.0      4.15      5.58      3.21
   SRCPARAM L0002043           0.0      4.15      5.58      3.21
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   SRCPARAM L0002045           0.0      4.15      5.58      3.21
   SRCPARAM L0002046           0.0      4.15      5.58      3.21
   SRCPARAM L0002047           0.0      4.15      5.58      3.21
   SRCPARAM L0002048           0.0      4.15      5.58      3.21
   SRCPARAM L0002049           0.0      4.15      5.58      3.21
   SRCPARAM L0002050           0.0      4.15      5.58      3.21
   SRCPARAM L0002051           0.0      4.15      5.58      3.21
   SRCPARAM L0002052           0.0      4.15      5.58      3.21
   SRCPARAM L0002053           0.0      4.15      5.58      3.21
   SRCPARAM L0002054           0.0      4.15      5.58      3.21
   SRCPARAM L0002055           0.0      4.15      5.58      3.21
   SRCPARAM L0002056           0.0      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0002057     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002058     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002059     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002060     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002061     0.0000003172      4.15      5.58      3.21
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   SRCPARAM L0002062     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002063     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002064     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002065     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002066     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002067     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002068     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002069     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002070     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002071     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002072     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002073     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002074     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002075     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002076     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002077     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002078     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002079     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002080     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002081     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002082     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002083     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002084     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002085     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002086     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002087     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002088     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002089     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002090     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002091     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002092     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002093     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002094     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002095     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002096     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002097     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002098     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002099     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002100     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002101     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002102     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002103     0.0000003172      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0002104     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002105     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002106     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002107     0.0000003172      4.15      5.58      3.21
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   SRCPARAM L0002108     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002109     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002110     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002111     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002112     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002113     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002114     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002115     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002116     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002117     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002118     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002119     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002120     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002121     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002122     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002123     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002124     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002125     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002126     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002127     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002128     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002129     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002130     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002131     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002132     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002133     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002134     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002135     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002136     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002137     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002138     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002139     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002140     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002141     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002142     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002143     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002144     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002145     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002146     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002147     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002148     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002149     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002150     0.0000003172      4.15      5.58      3.21
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   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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RE STARTING
   INCLUDED Westport_StevensCrk_PM.rou
RE FINISHED
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** AERMOD Meteorology Pathway
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ME STARTING
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   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
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** AERMOD Output Pathway
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   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
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   PLOTFILE 24 ALL 1ST WESTPORT_STEVENSCRK_PM.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_STEVENSCRK_PM.AD\AN00GALL.PLT 33
   SUMMFILE Westport_StevensCrk_PM.sum
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/18/2018
** File:
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_StevensCrk_PM.ADI
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** AERMOD Control Pathway
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CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL Westport_StevensCrk_PM.err
CO FINISHED
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** AERMOD Source Pathway
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**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
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** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
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   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
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   LOCATION L0001904     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
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LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
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LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
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   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
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** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
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LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
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LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
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LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
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LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
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LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
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   LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00001491
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 4.15, 5.58
** 584356.298, 4131105.625, 91.89, 4.15, 5.58
** 584754.237, 4131112.421, 86.16, 4.15, 5.58
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   LOCATION L0002058     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0002059     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0002060     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0002061     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0002062     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0002063     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0002064     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0002065     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0002066     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0002067     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0002068     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0002069     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0002070     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0002071     VOLUME   584367.886 4131105.823 91.93
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   LOCATION L0002072     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0002073     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0002074     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0002075     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0002076     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0002077     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0002078     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0002079     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0002080     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0002081     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0002082     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0002083     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0002084     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0002085     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0002086     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0002087     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0002088     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0002089     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0002090     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0002091     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0002092     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0002093     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0002094     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0002095     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0002096     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0002097     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0002098     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0002099     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0002100     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0002101     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0002102     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0002103     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.00001491
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 4.15, 5.58
** 584374.420, 4131122.992, 91.63, 4.15, 5.58
** 584190.176, 4131122.237, 90.97, 4.15, 5.58
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   LOCATION L0002104     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0002105     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0002106     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0002107     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0002108     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0002109     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0002110     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0002111     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0002112     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0002113     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0002114     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0002115     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0002116     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0002117     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0002118     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0002119     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0002120     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0002121     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0002122     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0002123     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0002124     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0002125     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0002126     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0002127     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0002128     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0002129     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0002130     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0002131     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0002132     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0002133     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0002134     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0002135     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0002136     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0002137     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0002138     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0002139     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0002140     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0002141     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0002142     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0002143     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0002144     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0002145     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0002146     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0002147     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0002148     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0002149     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0002150     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
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** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001876          0.0      4.15      5.58      2.93
   SRCPARAM L0001877          0.0      4.15      5.58      2.93
   SRCPARAM L0001878          0.0      4.15      5.58      2.93
   SRCPARAM L0001879          0.0      4.15      5.58      2.93
   SRCPARAM L0001880          0.0      4.15      5.58      2.93
   SRCPARAM L0001881          0.0      4.15      5.58      2.93
   SRCPARAM L0001882          0.0      4.15      5.58      2.93
   SRCPARAM L0001883          0.0      4.15      5.58      2.93
   SRCPARAM L0001884          0.0      4.15      5.58      2.93
   SRCPARAM L0001885          0.0      4.15      5.58      2.93
   SRCPARAM L0001886          0.0      4.15      5.58      2.93
   SRCPARAM L0001887          0.0      4.15      5.58      2.93
   SRCPARAM L0001888          0.0      4.15      5.58      2.93
   SRCPARAM L0001889          0.0      4.15      5.58      2.93
   SRCPARAM L0001890          0.0      4.15      5.58      2.93
   SRCPARAM L0001891          0.0      4.15      5.58      2.93
   SRCPARAM L0001892          0.0      4.15      5.58      2.93
   SRCPARAM L0001893          0.0      4.15      5.58      2.93
   SRCPARAM L0001894          0.0      4.15      5.58      2.93
   SRCPARAM L0001895          0.0      4.15      5.58      2.93
   SRCPARAM L0001896          0.0      4.15      5.58      2.93
   SRCPARAM L0001897          0.0      4.15      5.58      2.93
   SRCPARAM L0001898          0.0      4.15      5.58      2.93
   SRCPARAM L0001899          0.0      4.15      5.58      2.93
   SRCPARAM L0001900          0.0      4.15      5.58      2.93
   SRCPARAM L0001901          0.0      4.15      5.58      2.93
   SRCPARAM L0001902          0.0      4.15      5.58      2.93
   SRCPARAM L0001903          0.0      4.15      5.58      2.93
   SRCPARAM L0001904          0.0      4.15      5.58      2.93
   SRCPARAM L0001905          0.0      4.15      5.58      2.93
   SRCPARAM L0001906          0.0      4.15      5.58      2.93
   SRCPARAM L0001907          0.0      4.15      5.58      2.93
   SRCPARAM L0001908          0.0      4.15      5.58      2.93
   SRCPARAM L0001909          0.0      4.15      5.58      2.93
   SRCPARAM L0001910          0.0      4.15      5.58      2.93
   SRCPARAM L0001911          0.0      4.15      5.58      2.93
   SRCPARAM L0001912          0.0      4.15      5.58      2.93
   SRCPARAM L0001913          0.0      4.15      5.58      2.93
   SRCPARAM L0001914          0.0      4.15      5.58      2.93
   SRCPARAM L0001915          0.0      4.15      5.58      2.93
   SRCPARAM L0001916          0.0      4.15      5.58      2.93
   SRCPARAM L0001917          0.0      4.15      5.58      2.93
   SRCPARAM L0001918          0.0      4.15      5.58      2.93
   SRCPARAM L0001919          0.0      4.15      5.58      2.93
   SRCPARAM L0001920          0.0      4.15      5.58      2.93
   SRCPARAM L0001921          0.0      4.15      5.58      2.93
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   SRCPARAM L0001922           0.0      4.15      5.58      2.93
   SRCPARAM L0001923           0.0      4.15      5.58      2.93
   SRCPARAM L0001924           0.0      4.15      5.58      2.93
   SRCPARAM L0001925           0.0      4.15      5.58      2.93
   SRCPARAM L0001926           0.0      4.15      5.58      2.93
   SRCPARAM L0001927           0.0      4.15      5.58      2.93
   SRCPARAM L0001928           0.0      4.15      5.58      2.93
   SRCPARAM L0001929           0.0      4.15      5.58      2.93
   SRCPARAM L0001930           0.0      4.15      5.58      2.93
   SRCPARAM L0001931           0.0      4.15      5.58      2.93
   SRCPARAM L0001932           0.0      4.15      5.58      2.93
   SRCPARAM L0001933           0.0      4.15      5.58      2.93
   SRCPARAM L0001934           0.0      4.15      5.58      2.93
   SRCPARAM L0001935           0.0      4.15      5.58      2.93
   SRCPARAM L0001936           0.0      4.15      5.58      2.93
   SRCPARAM L0001937           0.0      4.15      5.58      2.93
   SRCPARAM L0001938           0.0      4.15      5.58      2.93
   SRCPARAM L0001939           0.0      4.15      5.58      2.93
   SRCPARAM L0001940           0.0      4.15      5.58      2.93
   SRCPARAM L0001941           0.0      4.15      5.58      2.93
   SRCPARAM L0001942           0.0      4.15      5.58      2.93
   SRCPARAM L0001943           0.0      4.15      5.58      2.93
   SRCPARAM L0001944           0.0      4.15      5.58      2.93
   SRCPARAM L0001945           0.0      4.15      5.58      2.93
   SRCPARAM L0001946           0.0      4.15      5.58      2.93
   SRCPARAM L0001947           0.0      4.15      5.58      2.93
   SRCPARAM L0001948           0.0      4.15      5.58      2.93
   SRCPARAM L0001949           0.0      4.15      5.58      2.93
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   SRCPARAM L0001951           0.0      4.15      5.58      2.93
   SRCPARAM L0001952           0.0      4.15      5.58      2.93
   SRCPARAM L0001953           0.0      4.15      5.58      2.93
   SRCPARAM L0001954           0.0      4.15      5.58      2.93
   SRCPARAM L0001955           0.0      4.15      5.58      2.93
   SRCPARAM L0001956           0.0      4.15      5.58      2.93
   SRCPARAM L0001957           0.0      4.15      5.58      2.93
   SRCPARAM L0001958           0.0      4.15      5.58      2.93
   SRCPARAM L0001959           0.0      4.15      5.58      2.93
   SRCPARAM L0001960           0.0      4.15      5.58      2.93
   SRCPARAM L0001961           0.0      4.15      5.58      2.93
   SRCPARAM L0001962           0.0      4.15      5.58      2.93
   SRCPARAM L0001963           0.0      4.15      5.58      2.93
   SRCPARAM L0001964           0.0      4.15      5.58      2.93
   SRCPARAM L0001965           0.0      4.15      5.58      2.93
   SRCPARAM L0001966           0.0      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001967           0.0      4.15      5.58      3.21
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SRCPARAM L0001968           0.0      4.15      5.58      3.21
SRCPARAM L0001969           0.0      4.15      5.58      3.21
SRCPARAM L0001970           0.0      4.15      5.58      3.21
SRCPARAM L0001971           0.0      4.15      5.58      3.21
SRCPARAM L0001972           0.0      4.15      5.58      3.21
SRCPARAM L0001973           0.0      4.15      5.58      3.21
SRCPARAM L0001974           0.0      4.15      5.58      3.21
SRCPARAM L0001975           0.0      4.15      5.58      3.21
SRCPARAM L0001976           0.0      4.15      5.58      3.21
SRCPARAM L0001977           0.0      4.15      5.58      3.21
SRCPARAM L0001978           0.0      4.15      5.58      3.21
SRCPARAM L0001979           0.0      4.15      5.58      3.21
SRCPARAM L0001980           0.0      4.15      5.58      3.21
SRCPARAM L0001981           0.0      4.15      5.58      3.21
SRCPARAM L0001982           0.0      4.15      5.58      3.21
SRCPARAM L0001983           0.0      4.15      5.58      3.21
SRCPARAM L0001984           0.0      4.15      5.58      3.21
SRCPARAM L0001985           0.0      4.15      5.58      3.21
SRCPARAM L0001986           0.0      4.15      5.58      3.21
SRCPARAM L0001987           0.0      4.15      5.58      3.21
SRCPARAM L0001988           0.0      4.15      5.58      3.21
SRCPARAM L0001989           0.0      4.15      5.58      3.21
SRCPARAM L0001990           0.0      4.15      5.58      3.21
SRCPARAM L0001991           0.0      4.15      5.58      3.21
SRCPARAM L0001992           0.0      4.15      5.58      3.21
SRCPARAM L0001993           0.0      4.15      5.58      3.21
SRCPARAM L0001994           0.0      4.15      5.58      3.21
SRCPARAM L0001995           0.0      4.15      5.58      3.21
SRCPARAM L0001996           0.0      4.15      5.58      3.21
SRCPARAM L0001997           0.0      4.15      5.58      3.21
SRCPARAM L0001998           0.0      4.15      5.58      3.21
SRCPARAM L0001999           0.0      4.15      5.58      3.21
SRCPARAM L0002000           0.0      4.15      5.58      3.21
SRCPARAM L0002001           0.0      4.15      5.58      3.21
SRCPARAM L0002002           0.0      4.15      5.58      3.21
SRCPARAM L0002003           0.0      4.15      5.58      3.21
SRCPARAM L0002004           0.0      4.15      5.58      3.21
SRCPARAM L0002005           0.0      4.15      5.58      3.21
SRCPARAM L0002006           0.0      4.15      5.58      3.21
SRCPARAM L0002007           0.0      4.15      5.58      3.21
SRCPARAM L0002008           0.0      4.15      5.58      3.21
SRCPARAM L0002009           0.0      4.15      5.58      3.21
SRCPARAM L0002010           0.0      4.15      5.58      3.21
SRCPARAM L0002011           0.0      4.15      5.58      3.21
SRCPARAM L0002012           0.0      4.15      5.58      3.21
SRCPARAM L0002013           0.0      4.15      5.58      3.21
SRCPARAM L0002014           0.0      4.15      5.58      3.21
SRCPARAM L0002015           0.0      4.15      5.58      3.21
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   SRCPARAM L0002016          0.0      4.15      5.58      3.21
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   SRCPARAM L0002018          0.0      4.15      5.58      3.21
   SRCPARAM L0002019          0.0      4.15      5.58      3.21
   SRCPARAM L0002020          0.0      4.15      5.58      3.21
   SRCPARAM L0002021          0.0      4.15      5.58      3.21
   SRCPARAM L0002022          0.0      4.15      5.58      3.21
   SRCPARAM L0002023          0.0      4.15      5.58      3.21
   SRCPARAM L0002024          0.0      4.15      5.58      3.21
   SRCPARAM L0002025          0.0      4.15      5.58      3.21
   SRCPARAM L0002026          0.0      4.15      5.58      3.21
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   SRCPARAM L0002031          0.0      4.15      5.58      3.21
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   SRCPARAM L0002037          0.0      4.15      5.58      3.21
   SRCPARAM L0002038          0.0      4.15      5.58      3.21
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   SRCPARAM L0002042          0.0      4.15      5.58      3.21
   SRCPARAM L0002043          0.0      4.15      5.58      3.21
   SRCPARAM L0002044          0.0      4.15      5.58      3.21
   SRCPARAM L0002045          0.0      4.15      5.58      3.21
   SRCPARAM L0002046          0.0      4.15      5.58      3.21
   SRCPARAM L0002047          0.0      4.15      5.58      3.21
   SRCPARAM L0002048          0.0      4.15      5.58      3.21
   SRCPARAM L0002049          0.0      4.15      5.58      3.21
   SRCPARAM L0002050          0.0      4.15      5.58      3.21
   SRCPARAM L0002051          0.0      4.15      5.58      3.21
   SRCPARAM L0002052          0.0      4.15      5.58      3.21
   SRCPARAM L0002053          0.0      4.15      5.58      3.21
   SRCPARAM L0002054          0.0      4.15      5.58      3.21
   SRCPARAM L0002055          0.0      4.15      5.58      3.21
   SRCPARAM L0002056          0.0      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
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   SRCPARAM L0002058     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002059     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002060     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002061     0.0000003172      4.15      5.58      3.21
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   SRCPARAM L0002062     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002063     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002064     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002065     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002066     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002067     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002068     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002069     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002070     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002071     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002072     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002073     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002074     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002075     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002076     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002077     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002078     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002079     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002080     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002081     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002082     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002083     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002084     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002085     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002086     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002087     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002088     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002089     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002090     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002091     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002092     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002093     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002094     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002095     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002096     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002097     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002098     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002099     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002100     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002101     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002102     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002103     0.0000003172      4.15      5.58      3.21
** ----------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0002104     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002105     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002106     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002107     0.0000003172      4.15      5.58      3.21
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   SRCPARAM L0002108     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002109     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002110     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002111     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002112     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002113     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002114     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002115     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002116     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002117     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002118     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002119     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002120     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002121     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002122     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002123     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002124     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002125     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002126     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002127     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002128     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002129     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002130     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002131     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002132     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002133     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002134     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002135     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002136     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002137     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002138     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002139     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002140     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002141     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002142     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002143     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002144     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002145     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002146     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002147     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002148     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002149     0.0000003172      4.15      5.58      3.21
   SRCPARAM L0002150     0.0000003172      4.15      5.58      3.21
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
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****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED Westport_StevensCrk_PM.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_STEVENSCRK_PM.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_STEVENSCRK_PM.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_STEVENSCRK_PM.AD\AN00GALL.PLT 33
   SUMMFILE Westport_StevensCrk_PM.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of          181 Warning Message(s)
 A Total of            0 Informational Message(s)
```

```
   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     386         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     387         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     388         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     389         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     390         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     391         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     392         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     393         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     394         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     395         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     396         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     397         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     398         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     399         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     400         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     401         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     402         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     403         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     404         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     405         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     406         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     407         VPARM: Input Parameter May Be Out-of-Range for Parameter
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       QS
SO W320     408        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     409        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     410        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     411        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     412        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     413        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     414        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     415        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     416        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     417        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     418        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     419        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     420        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     421        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     422        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     423        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     424        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     425        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     426        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     427        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     428        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     429        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     430        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     431        VPARM: Input Parameter May Be Out-of-Range for Parameter
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         QS
SO W320      432         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      433         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      434         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      448         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      449         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      450         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      451         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      452         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      453         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      454         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      455         VPARM: Input Parameter May Be Out-of-Range for Parameter
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       QS
SO W320     456        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     457        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     461        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     463        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     465        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     470        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     471        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     472        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     473        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     474        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     475        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     476        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     479        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     480        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     481        VPARM: Input Parameter May Be Out-of-Range for Parameter
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       QS
SO W320     482        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     483        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     484        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     501        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     502        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     503        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     504        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     505        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     506        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     507        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     510        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     511        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     512        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     513        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     514        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     515        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     516        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     521        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     524        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     525        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     526        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     527        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     528        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     529        VPARM: Input Parameter May Be Out-of-Range for Parameter
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        QS
SO W320      530         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      531         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      532         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      533         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      534         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      535         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      536         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      537         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      538         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      540         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      541         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      542         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      543         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      544         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      545         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      546         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      547         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      548         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      549         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      550         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      552         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      553         VPARM: Input Parameter May Be Out-of-Range for Parameter
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        QS
 SO W320     554        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     555        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     556        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     560        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     561        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     562        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     563        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     564        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     565        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     566        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     567        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     568        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:10:58

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   275 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   1918000.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:    275 Source(s);       1 Source Group(s); and     101
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    275 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  14134
```

```
 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    11.90 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                               ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Westport_StevensCrk_PM.err

 **File for Summary of Results:   Westport_StevensCrk_PM.sum

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***       17:10:58

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                       BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
```

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SZ     SOURCE   SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)               BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001876         0   0.00000E+00  584315.9 4130704.1    92.2     4.15     5.58
2.93     YES
 L0001877         0   0.00000E+00  584311.5 4130715.3    92.0     4.15     5.58
2.93     YES
 L0001878         0   0.00000E+00  584307.1 4130726.5    91.5     4.15     5.58
2.93     YES
 L0001879         0   0.00000E+00  584302.7 4130737.6    91.4     4.15     5.58
2.93     YES
 L0001880         0   0.00000E+00  584298.3 4130748.8    91.4     4.15     5.58
2.93     YES
 L0001881         0   0.00000E+00  584293.9 4130760.0    91.9     4.15     5.58
2.93     YES
 L0001882         0   0.00000E+00  584289.5 4130771.1    91.9     4.15     5.58
2.93     YES
 L0001883         0   0.00000E+00  584285.1 4130782.3    91.4     4.15     5.58
2.93     YES
 L0001884         0   0.00000E+00  584280.7 4130793.5    91.0     4.15     5.58
2.93     YES
 L0001885         0   0.00000E+00  584276.3 4130804.6    90.9     4.15     5.58
2.93     YES
 L0001886         0   0.00000E+00  584271.9 4130815.8    90.8     4.15     5.58
2.93     YES
 L0001887         0   0.00000E+00  584267.5 4130827.0    90.7     4.15     5.58
2.93     YES
 L0001888         0   0.00000E+00  584263.2 4130838.1    90.6     4.15     5.58
2.93     YES
 L0001889         0   0.00000E+00  584258.8 4130849.3    90.5     4.15     5.58
2.93     YES
 L0001890         0   0.00000E+00  584254.4 4130860.5    90.3     4.15     5.58
2.93     YES
 L0001891         0   0.00000E+00  584250.0 4130871.6    90.2     4.15     5.58
2.93     YES
 L0001892         0   0.00000E+00  584245.6 4130882.8    90.2     4.15     5.58
2.93     YES
 L0001893         0   0.00000E+00  584241.2 4130894.0    90.1     4.15     5.58
2.93     YES
 L0001894         0   0.00000E+00  584236.8 4130905.1    89.9     4.15     5.58
2.93     YES
 L0001895         0   0.00000E+00  584232.4 4130916.3    89.6     4.15     5.58
2.93     YES
 L0001896         0   0.00000E+00  584228.0 4130927.5    89.5     4.15     5.58
2.93     YES
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 L0001897         0   0.00000E+00  584223.6 4130938.6    89.4     4.15     5.58
2.93     YES
 L0001898         0   0.00000E+00  584219.2 4130949.8    89.3     4.15     5.58
2.93     YES
 L0001899         0   0.00000E+00  584214.8 4130961.0    89.2     4.15     5.58
2.93     YES
 L0001900         0   0.00000E+00  584212.0 4130972.6    89.0     4.15     5.58
2.93     YES
 L0001901         0   0.00000E+00  584209.2 4130984.3    88.8     4.15     5.58
2.93     YES
 L0001902         0   0.00000E+00  584206.4 4130996.0    88.4     4.15     5.58
2.93     YES
 L0001903         0   0.00000E+00  584203.6 4131007.6    88.2     4.15     5.58
2.93     YES
 L0001904         0   0.00000E+00  584200.8 4131019.3    88.0     4.15     5.58
2.93     YES
 L0001905         0   0.00000E+00  584198.1 4131031.0    87.8     4.15     5.58
2.93     YES
 L0001906         0   0.00000E+00  584195.3 4131042.7    87.6     4.15     5.58
2.93     YES
 L0001907         0   0.00000E+00  584192.5 4131054.3    87.5     4.15     5.58
2.93     YES
 L0001908         0   0.00000E+00  584189.7 4131066.0    87.5     4.15     5.58
2.93     YES
 L0001909         0   0.00000E+00  584186.9 4131077.7    87.5     4.15     5.58
2.93     YES
 L0001910         0   0.00000E+00  584184.2 4131089.4    87.3     4.15     5.58
2.93     YES
 L0001911         0   0.00000E+00  584181.4 4131101.0    87.0     4.15     5.58
2.93     YES
 L0001912         0   0.00000E+00  584178.6 4131112.7    86.9     4.15     5.58
2.93     YES
 L0001913         0   0.00000E+00  584176.3 4131124.5    86.8     4.15     5.58
2.93     YES
 L0001914         0   0.00000E+00  584174.0 4131136.3    86.8     4.15     5.58
2.93     YES
 L0001915         0   0.00000E+00  584171.8 4131148.0    86.7     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                                              *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001916         0   0.00000E+00  584169.5 4131159.8    86.7     4.15     5.58
2.93     YES
 L0001917         0   0.00000E+00  584167.2 4131171.6    86.8     4.15     5.58
2.93     YES
 L0001918         0   0.00000E+00  584164.9 4131183.4    86.9     4.15     5.58
2.93     YES
 L0001919         0   0.00000E+00  584162.6 4131195.2    87.1     4.15     5.58
2.93     YES
 L0001920         0   0.00000E+00  584160.3 4131206.9    87.2     4.15     5.58
2.93     YES
 L0001921         0   0.00000E+00  584158.0 4131218.7    87.3     4.15     5.58
2.93     YES
 L0001922         0   0.00000E+00  584155.7 4131230.5    87.3     4.15     5.58
2.93     YES
 L0001923         0   0.00000E+00  584153.5 4131242.3    87.3     4.15     5.58
2.93     YES
 L0001924         0   0.00000E+00  584151.2 4131254.1    87.4     4.15     5.58
2.93     YES
 L0001925         0   0.00000E+00  584148.9 4131265.8    87.5     4.15     5.58
2.93     YES
 L0001926         0   0.00000E+00  584146.6 4131277.6    87.6     4.15     5.58
2.93     YES
 L0001927         0   0.00000E+00  584144.3 4131289.4    87.8     4.15     5.58
2.93     YES
 L0001928         0   0.00000E+00  584142.0 4131301.2    87.9     4.15     5.58
2.93     YES
 L0001929         0   0.00000E+00  584139.7 4131313.0    88.1     4.15     5.58
2.93     YES
 L0001930         0   0.00000E+00  584137.4 4131324.7    88.4     4.15     5.58
2.93     YES
 L0001931         0   0.00000E+00  584135.1 4131336.5    88.6     4.15     5.58
2.93     YES
 L0001932         0   0.00000E+00  584132.9 4131348.3    88.7     4.15     5.58
2.93     YES
 L0001933         0   0.00000E+00  584130.6 4131360.1    88.8     4.15     5.58
2.93     YES
 L0001934         0   0.00000E+00  584128.3 4131371.9    88.9     4.15     5.58
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2.93     YES
 L0001935         0   0.00000E+00  584126.0 4131383.6    89.0      4.15      5.58
2.93     YES
 L0001936         0   0.00000E+00  584123.7 4131395.4    89.2      4.15      5.58
2.93     YES
 L0001937         0   0.00000E+00  584121.4 4131407.2    89.4      4.15      5.58
2.93     YES
 L0001938         0   0.00000E+00  584119.1 4131419.0    89.6      4.15      5.58
2.93     YES
 L0001939         0   0.00000E+00  584116.8 4131430.8    89.8      4.15      5.58
2.93     YES
 L0001940         0   0.00000E+00  584114.6 4131442.5    90.0      4.15      5.58
2.93     YES
 L0001941         0   0.00000E+00  584112.3 4131454.3    90.1      4.15      5.58
2.93     YES
 L0001942         0   0.00000E+00  584109.3 4131465.9    90.2      4.15      5.58
2.93     YES
 L0001943         0   0.00000E+00  584105.6 4131477.3    90.3      4.15      5.58
2.93     YES
 L0001944         0   0.00000E+00  584101.9 4131488.8    90.4      4.15      5.58
2.93     YES
 L0001945         0   0.00000E+00  584098.2 4131500.2    90.5      4.15      5.58
2.93     YES
 L0001946         0   0.00000E+00  584094.6 4131511.6    90.6      4.15      5.58
2.93     YES
 L0001947         0   0.00000E+00  584090.9 4131523.0    90.7      4.15      5.58
2.93     YES
 L0001948         0   0.00000E+00  584087.2 4131534.5    90.9      4.15      5.58
2.93     YES
 L0001949         0   0.00000E+00  584083.5 4131545.9    91.0      4.15      5.58
2.93     YES
 L0001950         0   0.00000E+00  584079.4 4131557.1    91.1      4.15      5.58
2.93     YES
 L0001951         0   0.00000E+00  584075.0 4131568.3    91.3      4.15      5.58
2.93     YES
 L0001952         0   0.00000E+00  584070.7 4131579.5    91.4      4.15      5.58
2.93     YES
 L0001953         0   0.00000E+00  584066.3 4131590.7    91.5      4.15      5.58
2.93     YES
 L0001954         0   0.00000E+00  584062.0 4131601.9    91.7      4.15      5.58
2.93     YES
 L0001955         0   0.00000E+00  584057.6 4131613.0    91.8      4.15      5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                         ***        17:10:58
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                                    PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                          *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001956         0   0.00000E+00  584053.3 4131624.2    92.0     4.15     5.58
2.93     YES
 L0001957         0   0.00000E+00  584048.9 4131635.4    92.0     4.15     5.58
2.93     YES
 L0001958         0   0.00000E+00  584044.6 4131646.6    92.1     4.15     5.58
2.93     YES
 L0001959         0   0.00000E+00  584040.2 4131657.8    92.2     4.15     5.58
2.93     YES
 L0001960         0   0.00000E+00  584035.9 4131669.0    92.4     4.15     5.58
2.93     YES
 L0001961         0   0.00000E+00  584031.2 4131680.0    92.4     4.15     5.58
2.93     YES
 L0001962         0   0.00000E+00  584024.6 4131690.0    92.5     4.15     5.58
2.93     YES
 L0001963         0   0.00000E+00  584017.9 4131700.0    92.5     4.15     5.58
2.93     YES
 L0001964         0   0.00000E+00  584011.3 4131710.0    92.6     4.15     5.58
2.93     YES
 L0001965         0   0.00000E+00  584004.6 4131719.9    92.6     4.15     5.58
2.93     YES
 L0001966         0   0.00000E+00  583997.9 4131729.9    92.6     4.15     5.58
2.93     YES
 L0001967         0   0.00000E+00  583976.3 4131725.3    91.9     4.15     5.58
3.21     YES
 L0001968         0   0.00000E+00  583983.1 4131715.4    91.9     4.15     5.58
3.21     YES
 L0001969         0   0.00000E+00  583989.9 4131705.5    91.9     4.15     5.58
3.21     YES
 L0001970         0   0.00000E+00  583996.7 4131695.6    92.0     4.15     5.58
3.21     YES
 L0001971         0   0.00000E+00  584003.5 4131685.8    91.7     4.15     5.58
3.21     YES
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 L0001972         0   0.00000E+00  584010.2 4131675.9    91.7     4.15     5.58
3.21     YES
 L0001973         0   0.00000E+00  584017.0 4131666.0    91.9     4.15     5.58
3.21     YES
 L0001974         0   0.00000E+00  584023.8 4131656.1    91.9     4.15     5.58
3.21     YES
 L0001975         0   0.00000E+00  584028.5 4131645.1    91.6     4.15     5.58
3.21     YES
 L0001976         0   0.00000E+00  584032.5 4131633.8    91.4     4.15     5.58
3.21     YES
 L0001977         0   0.00000E+00  584036.5 4131622.4    91.3     4.15     5.58
3.21     YES
 L0001978         0   0.00000E+00  584040.5 4131611.1    91.2     4.15     5.58
3.21     YES
 L0001979         0   0.00000E+00  584044.5 4131599.8    91.2     4.15     5.58
3.21     YES
 L0001980         0   0.00000E+00  584048.5 4131588.5    91.1     4.15     5.58
3.21     YES
 L0001981         0   0.00000E+00  584052.5 4131577.2    90.8     4.15     5.58
3.21     YES
 L0001982         0   0.00000E+00  584056.5 4131565.9    90.6     4.15     5.58
3.21     YES
 L0001983         0   0.00000E+00  584060.5 4131554.6    90.4     4.15     5.58
3.21     YES
 L0001984         0   0.00000E+00  584064.5 4131543.2    90.3     4.15     5.58
3.21     YES
 L0001985         0   0.00000E+00  584068.0 4131531.8    90.2     4.15     5.58
3.21     YES
 L0001986         0   0.00000E+00  584071.2 4131520.2    90.0     4.15     5.58
3.21     YES
 L0001987         0   0.00000E+00  584074.3 4131508.6    90.2     4.15     5.58
3.21     YES
 L0001988         0   0.00000E+00  584077.4 4131497.0    90.0     4.15     5.58
3.21     YES
 L0001989         0   0.00000E+00  584080.6 4131485.5    89.5     4.15     5.58
3.21     YES
 L0001990         0   0.00000E+00  584083.7 4131473.9    89.4     4.15     5.58
3.21     YES
 L0001991         0   0.00000E+00  584086.8 4131462.3    89.3     4.15     5.58
3.21     YES
 L0001992         0   0.00000E+00  584090.0 4131450.7    89.2     4.15     5.58
3.21     YES
 L0001993         0   0.00000E+00  584093.1 4131439.1    89.1     4.15     5.58
3.21     YES
 L0001994         0   0.00000E+00  584096.2 4131427.5    89.0     4.15     5.58
3.21     YES
 L0001995         0   0.00000E+00  584099.3 4131416.0    89.2     4.15     5.58
3.21     YES
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♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                 *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -


 L0001996         0   0.00000E+00  584102.5 4131404.4    89.2     4.15     5.58
3.21     YES
 L0001997         0   0.00000E+00  584105.6 4131392.8    89.0     4.15     5.58
3.21     YES
 L0001998         0   0.00000E+00  584108.7 4131381.2    88.9     4.15     5.58
3.21     YES
 L0001999         0   0.00000E+00  584111.1 4131369.4    88.7     4.15     5.58
3.21     YES
 L0002000         0   0.00000E+00  584113.3 4131357.7    88.6     4.15     5.58
3.21     YES
 L0002001         0   0.00000E+00  584115.6 4131345.9    88.6     4.15     5.58
3.21     YES
 L0002002         0   0.00000E+00  584117.9 4131334.1    88.5     4.15     5.58
3.21     YES
 L0002003         0   0.00000E+00  584120.1 4131322.3    88.5     4.15     5.58
3.21     YES
 L0002004         0   0.00000E+00  584122.4 4131310.5    88.3     4.15     5.58
3.21     YES
 L0002005         0   0.00000E+00  584124.6 4131298.7    88.2     4.15     5.58
3.21     YES
 L0002006         0   0.00000E+00  584126.9 4131286.9    88.0     4.15     5.58
3.21     YES
 L0002007         0   0.00000E+00  584129.1 4131275.2    87.8     4.15     5.58
3.21     YES
 L0002008         0   0.00000E+00  584131.4 4131263.4    87.5     4.15     5.58
3.21     YES
 L0002009         0   0.00000E+00  584133.7 4131251.6    87.4     4.15     5.58
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3.21     YES
 L0002010         0   0.00000E+00  584135.9 4131239.8    87.2     4.15     5.58
3.21     YES
 L0002011         0   0.00000E+00  584138.2 4131228.0    87.2     4.15     5.58
3.21     YES
 L0002012         0   0.00000E+00  584140.4 4131216.2    87.1     4.15     5.58
3.21     YES
 L0002013         0   0.00000E+00  584142.8 4131204.5    87.3     4.15     5.58
3.21     YES
 L0002014         0   0.00000E+00  584145.2 4131192.7    87.7     4.15     5.58
3.21     YES
 L0002015         0   0.00000E+00  584147.7 4131181.0    87.8     4.15     5.58
3.21     YES
 L0002016         0   0.00000E+00  584150.1 4131169.2    87.8     4.15     5.58
3.21     YES
 L0002017         0   0.00000E+00  584152.6 4131157.5    87.6     4.15     5.58
3.21     YES
 L0002018         0   0.00000E+00  584155.0 4131145.7    87.2     4.15     5.58
3.21     YES
 L0002019         0   0.00000E+00  584157.5 4131134.0    86.9     4.15     5.58
3.21     YES
 L0002020         0   0.00000E+00  584159.9 4131122.2    87.0     4.15     5.58
3.21     YES
 L0002021         0   0.00000E+00  584162.4 4131110.5    87.0     4.15     5.58
3.21     YES
 L0002022         0   0.00000E+00  584164.8 4131098.7    87.2     4.15     5.58
3.21     YES
 L0002023         0   0.00000E+00  584167.3 4131087.0    87.3     4.15     5.58
3.21     YES
 L0002024         0   0.00000E+00  584169.7 4131075.2    87.8     4.15     5.58
3.21     YES
 L0002025         0   0.00000E+00  584172.2 4131063.5    88.2     4.15     5.58
3.21     YES
 L0002026         0   0.00000E+00  584174.6 4131051.7    88.4     4.15     5.58
3.21     YES
 L0002027         0   0.00000E+00  584177.1 4131040.0    88.5     4.15     5.58
3.21     YES
 L0002028         0   0.00000E+00  584180.4 4131028.5    88.4     4.15     5.58
3.21     YES
 L0002029         0   0.00000E+00  584183.7 4131016.9    88.3     4.15     5.58
3.21     YES
 L0002030         0   0.00000E+00  584187.1 4131005.4    88.5     4.15     5.58
3.21     YES
 L0002031         0   0.00000E+00  584190.4 4130993.9    88.7     4.15     5.58
3.21     YES
 L0002032         0   0.00000E+00  584193.7 4130982.4    88.9     4.15     5.58
3.21     YES
 L0002033         0   0.00000E+00  584197.1 4130970.8    89.2     4.15     5.58
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3.21     YES
 L0002034         0   0.00000E+00  584200.4 4130959.3    89.4     4.15     5.58
3.21     YES
 L0002035         0   0.00000E+00  584203.8 4130947.8    89.6     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                          *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -


 L0002036         0   0.00000E+00  584207.1 4130936.2    89.7     4.15     5.58
3.21     YES
 L0002037         0   0.00000E+00  584210.4 4130924.7    89.8     4.15     5.58
3.21     YES
 L0002038         0   0.00000E+00  584213.8 4130913.2    90.0     4.15     5.58
3.21     YES
 L0002039         0   0.00000E+00  584217.1 4130901.7    90.1     4.15     5.58
3.21     YES
 L0002040         0   0.00000E+00  584220.4 4130890.1    90.3     4.15     5.58
3.21     YES
 L0002041         0   0.00000E+00  584223.8 4130878.6    90.5     4.15     5.58
3.21     YES
 L0002042         0   0.00000E+00  584228.2 4130867.4    90.7     4.15     5.58
3.21     YES
 L0002043         0   0.00000E+00  584232.6 4130856.3    90.8     4.15     5.58
3.21     YES
 L0002044         0   0.00000E+00  584237.0 4130845.1    90.8     4.15     5.58
3.21     YES
 L0002045         0   0.00000E+00  584241.4 4130834.0    90.8     4.15     5.58
3.21     YES
 L0002046         0   0.00000E+00  584245.8 4130822.8    90.8     4.15     5.58
3.21     YES
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 L0002047         0   0.00000E+00  584250.2 4130811.6    90.9      4.15      5.58
3.21     YES
 L0002048         0   0.00000E+00  584254.6 4130800.5    91.4      4.15      5.58
3.21     YES
 L0002049         0   0.00000E+00  584259.0 4130789.3    91.1      4.15      5.58
3.21     YES
 L0002050         0   0.00000E+00  584263.4 4130778.2    91.2      4.15      5.58
3.21     YES
 L0002051         0   0.00000E+00  584267.9 4130767.0    91.2      4.15      5.58
3.21     YES
 L0002052         0   0.00000E+00  584272.3 4130755.8    91.3      4.15      5.58
3.21     YES
 L0002053         0   0.00000E+00  584276.7 4130744.7    91.7      4.15      5.58
3.21     YES
 L0002054         0   0.00000E+00  584281.1 4130733.5    91.8      4.15      5.58
3.21     YES
 L0002055         0   0.00000E+00  584285.5 4130722.4    91.5      4.15      5.58
3.21     YES
 L0002056         0   0.00000E+00  584289.9 4130711.2    91.5      4.15      5.58
3.21     YES
 L0002057         0   0.31720E-06  584199.9 4131101.3    89.1      4.15      5.58
3.21     YES
 L0002058         0   0.31720E-06  584211.9 4131101.6    90.6      4.15      5.58
3.21     YES
 L0002059         0   0.31720E-06  584223.9 4131101.9    92.2      4.15      5.58
3.21     YES
 L0002060         0   0.31720E-06  584235.9 4131102.3    93.2      4.15      5.58
3.21     YES
 L0002061         0   0.31720E-06  584247.9 4131102.6    93.0      4.15      5.58
3.21     YES
 L0002062         0   0.31720E-06  584259.9 4131102.9    93.0      4.15      5.58
3.21     YES
 L0002063         0   0.31720E-06  584271.9 4131103.3    93.2      4.15      5.58
3.21     YES
 L0002064         0   0.31720E-06  584283.9 4131103.6    93.2      4.15      5.58
3.21     YES
 L0002065         0   0.31720E-06  584295.9 4131103.9    93.0      4.15      5.58
3.21     YES
 L0002066         0   0.31720E-06  584307.9 4131104.3    92.6      4.15      5.58
3.21     YES
 L0002067         0   0.31720E-06  584319.9 4131104.6    92.3      4.15      5.58
3.21     YES
 L0002068         0   0.31720E-06  584331.9 4131104.9    92.0      4.15      5.58
3.21     YES
 L0002069         0   0.31720E-06  584343.9 4131105.3    92.0      4.15      5.58
3.21     YES
 L0002070         0   0.31720E-06  584355.9 4131105.6    91.9      4.15      5.58
3.21     YES
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 L0002071         0   0.31720E-06  584367.9 4131105.8    91.9     4.15     5.58
3.21     YES
 L0002072         0   0.31720E-06  584379.9 4131106.0    91.9     4.15     5.58
3.21     YES
 L0002073         0   0.31720E-06  584391.9 4131106.2    91.6     4.15     5.58
3.21     YES
 L0002074         0   0.31720E-06  584403.9 4131106.4    91.4     4.15     5.58
3.21     YES
 L0002075         0   0.31720E-06  584415.9 4131106.6    91.3     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0002076         0   0.31720E-06  584427.9 4131106.8    91.2     4.15     5.58
3.21     YES
 L0002077         0   0.31720E-06  584439.9 4131107.1    91.0     4.15     5.58
3.21     YES
 L0002078         0   0.31720E-06  584451.9 4131107.3    90.9     4.15     5.58
3.21     YES
 L0002079         0   0.31720E-06  584463.9 4131107.5    90.8     4.15     5.58
3.21     YES
 L0002080         0   0.31720E-06  584475.9 4131107.7    90.6     4.15     5.58
3.21     YES
 L0002081         0   0.31720E-06  584487.9 4131107.9    90.2     4.15     5.58
3.21     YES
 L0002082         0   0.31720E-06  584499.9 4131108.1    89.8     4.15     5.58
3.21     YES
 L0002083         0   0.31720E-06  584511.9 4131108.3    89.6     4.15     5.58
3.21     YES
 L0002084         0   0.31720E-06  584523.9 4131108.5    89.4     4.15     5.58
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3.21     YES
 L0002085         0   0.31720E-06  584535.9 4131108.7    89.4      4.15      5.58
3.21     YES
 L0002086         0   0.31720E-06  584547.9 4131108.9    89.5      4.15      5.58
3.21     YES
 L0002087         0   0.31720E-06  584559.9 4131109.1    89.4      4.15      5.58
3.21     YES
 L0002088         0   0.31720E-06  584571.9 4131109.3    89.2      4.15      5.58
3.21     YES
 L0002089         0   0.31720E-06  584583.9 4131109.5    89.0      4.15      5.58
3.21     YES
 L0002090         0   0.31720E-06  584595.9 4131109.7    88.8      4.15      5.58
3.21     YES
 L0002091         0   0.31720E-06  584607.9 4131109.9    88.6      4.15      5.58
3.21     YES
 L0002092         0   0.31720E-06  584619.8 4131110.1    88.3      4.15      5.58
3.21     YES
 L0002093         0   0.31720E-06  584631.8 4131110.3    88.1      4.15      5.58
3.21     YES
 L0002094         0   0.31720E-06  584643.8 4131110.5    87.9      4.15      5.58
3.21     YES
 L0002095         0   0.31720E-06  584655.8 4131110.7    87.8      4.15      5.58
3.21     YES
 L0002096         0   0.31720E-06  584667.8 4131110.9    87.7      4.15      5.58
3.21     YES
 L0002097         0   0.31720E-06  584679.8 4131111.1    87.5      4.15      5.58
3.21     YES
 L0002098         0   0.31720E-06  584691.8 4131111.4    87.4      4.15      5.58
3.21     YES
 L0002099         0   0.31720E-06  584703.8 4131111.6    87.3      4.15      5.58
3.21     YES
 L0002100         0   0.31720E-06  584715.8 4131111.8    87.0      4.15      5.58
3.21     YES
 L0002101         0   0.31720E-06  584727.8 4131112.0    86.7      4.15      5.58
3.21     YES
 L0002102         0   0.31720E-06  584739.8 4131112.2    86.4      4.15      5.58
3.21     YES
 L0002103         0   0.31720E-06  584751.8 4131112.4    86.2      4.15      5.58
3.21     YES
 L0002104         0   0.31720E-06  584749.7 4131127.5    86.1      4.15      5.58
3.21     YES
 L0002105         0   0.31720E-06  584737.7 4131127.3    86.3      4.15      5.58
3.21     YES
 L0002106         0   0.31720E-06  584725.7 4131127.2    86.5      4.15      5.58
3.21     YES
 L0002107         0   0.31720E-06  584713.8 4131127.0    86.7      4.15      5.58
3.21     YES
 L0002108         0   0.31720E-06  584701.8 4131126.9    86.9      4.15      5.58
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3.21     YES
 L0002109         0   0.31720E-06  584689.8 4131126.7    87.2     4.15     5.58
3.21     YES
 L0002110         0   0.31720E-06  584677.8 4131126.6    87.4     4.15     5.58
3.21     YES
 L0002111         0   0.31720E-06  584665.8 4131126.5    87.6     4.15     5.58
3.21     YES
 L0002112         0   0.31720E-06  584653.8 4131126.3    87.7     4.15     5.58
3.21     YES
 L0002113         0   0.31720E-06  584641.8 4131126.2    87.9     4.15     5.58
3.21     YES
 L0002114         0   0.31720E-06  584629.8 4131126.0    88.0     4.15     5.58
3.21     YES
 L0002115         0   0.31720E-06  584617.8 4131125.9    88.2     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - 

 L0002116         0   0.31720E-06  584605.8 4131125.7    88.4     4.15     5.58
3.21     YES
 L0002117         0   0.31720E-06  584593.8 4131125.6    88.6     4.15     5.58
3.21     YES
 L0002118         0   0.31720E-06  584581.8 4131125.5    88.8     4.15     5.58
3.21     YES
 L0002119         0   0.31720E-06  584569.8 4131125.3    89.0     4.15     5.58
3.21     YES
 L0002120         0   0.31720E-06  584557.8 4131125.2    89.1     4.15     5.58
3.21     YES
 L0002121         0   0.31720E-06  584545.8 4131125.0    89.2     4.15     5.58
3.21     YES
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 L0002122         0   0.31720E-06  584533.8 4131124.9    89.3     4.15     5.58
3.21     YES
 L0002123         0   0.31720E-06  584521.8 4131124.7    89.4     4.15     5.58
3.21     YES
 L0002124         0   0.31720E-06  584509.8 4131124.6    89.6     4.15     5.58
3.21     YES
 L0002125         0   0.31720E-06  584497.8 4131124.5    89.8     4.15     5.58
3.21     YES
 L0002126         0   0.31720E-06  584485.8 4131124.3    90.0     4.15     5.58
3.21     YES
 L0002127         0   0.31720E-06  584473.8 4131124.2    90.2     4.15     5.58
3.21     YES
 L0002128         0   0.31720E-06  584461.8 4131124.0    90.3     4.15     5.58
3.21     YES
 L0002129         0   0.31720E-06  584449.8 4131123.9    90.5     4.15     5.58
3.21     YES
 L0002130         0   0.31720E-06  584437.8 4131123.7    90.7     4.15     5.58
3.21     YES
 L0002131         0   0.31720E-06  584425.8 4131123.6    90.9     4.15     5.58
3.21     YES
 L0002132         0   0.31720E-06  584413.8 4131123.5    91.1     4.15     5.58
3.21     YES
 L0002133         0   0.31720E-06  584401.8 4131123.3    91.2     4.15     5.58
3.21     YES
 L0002134         0   0.31720E-06  584389.8 4131123.2    91.4     4.15     5.58
3.21     YES
 L0002135         0   0.31720E-06  584377.8 4131123.0    91.5     4.15     5.58
3.21     YES
 L0002136         0   0.31720E-06  584365.8 4131123.0    91.7     4.15     5.58
3.21     YES
 L0002137         0   0.31720E-06  584353.8 4131122.9    91.8     4.15     5.58
3.21     YES
 L0002138         0   0.31720E-06  584341.8 4131122.9    92.0     4.15     5.58
3.21     YES
 L0002139         0   0.31720E-06  584329.8 4131122.8    92.1     4.15     5.58
3.21     YES
 L0002140         0   0.31720E-06  584317.8 4131122.8    92.3     4.15     5.58
3.21     YES
 L0002141         0   0.31720E-06  584305.8 4131122.7    92.4     4.15     5.58
3.21     YES
 L0002142         0   0.31720E-06  584293.8 4131122.7    92.5     4.15     5.58
3.21     YES
 L0002143         0   0.31720E-06  584281.8 4131122.6    92.6     4.15     5.58
3.21     YES
 L0002144         0   0.31720E-06  584269.8 4131122.6    92.8     4.15     5.58
3.21     YES
 L0002145         0   0.31720E-06  584257.8 4131122.5    92.9     4.15     5.58
3.21     YES
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 L0002146         0   0.31720E-06  584245.8 4131122.5    93.1     4.15     5.58
3.21     YES
 L0002147         0   0.31720E-06  584233.8 4131122.4    93.2     4.15     5.58
3.21     YES
 L0002148         0   0.31720E-06  584221.8 4131122.4    92.5     4.15     5.58
3.21     YES
 L0002149         0   0.31720E-06  584209.8 4131122.3    91.6     4.15     5.58
3.21     YES
 L0002150         0   0.31720E-06  584197.8 4131122.3    89.8     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN



                                           *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                SOURCE IDs
 -----------                                                ----------


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             L0001884    , L0001885    , L0001886    , L0001887    , L0001888    ,
L0001889    , L0001890    , L0001891    ,

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L0001897    , L0001898    , L0001899    ,

             L0001900    , L0001901    , L0001902    , L0001903    , L0001904    ,
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             L0001908    , L0001909    , L0001910    , L0001911    , L0001912    ,
L0001913    , L0001914    , L0001915    ,

             L0001916    , L0001917    , L0001918    , L0001919    , L0001920    ,
L0001921    , L0001922    , L0001923    ,

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L0001969    , L0001970    , L0001971    ,

             L0001972    , L0001973    , L0001974    , L0001975    , L0001976    ,
L0001977    , L0001978    , L0001979    ,

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L0002009    , L0002010    , L0002011    ,

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L0002017    , L0002018    , L0002019    ,

             L0002020    , L0002021    , L0002022    , L0002023    , L0002024    ,
L0002025    , L0002026    , L0002027    ,

             L0002028    , L0002029    , L0002030    , L0002031    , L0002032    ,
L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                              *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                 SOURCE IDs
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L0002041    , L0002042    , L0002043    ,

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L0002057    , L0002058    , L0002059    ,

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             L0002068    , L0002069    , L0002070    , L0002071    , L0002072    ,
L0002073    , L0002074    , L0002075    ,

             L0002076    , L0002077    , L0002078    , L0002079    , L0002080    ,
L0002081    , L0002082    , L0002083    ,

             L0002084    , L0002085    , L0002086    , L0002087    , L0002088    ,
L0002089    , L0002090    , L0002091    ,

             L0002092    , L0002093    , L0002094    , L0002095    , L0002096    ,
L0002097    , L0002098    , L0002099    ,

             L0002100    , L0002101    , L0002102    , L0002103    , L0002104    ,
L0002105    , L0002106    , L0002107    ,

             L0002108    , L0002109    , L0002110    , L0002111    , L0002112    ,
L0002113    , L0002114    , L0002115    ,

             L0002116    , L0002117    , L0002118    , L0002119    , L0002120    ,
L0002121    , L0002122    , L0002123    ,

             L0002124    , L0002125    , L0002126    , L0002127    , L0002128    ,
L0002129    , L0002130    , L0002131    ,

             L0002132    , L0002133    , L0002134    , L0002135    , L0002136    ,
L0002137    , L0002138    , L0002139    ,

             L0002140    , L0002141    , L0002142    , L0002143    , L0002144    ,
L0002145    , L0002146    , L0002147    ,
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             L0002148    , L0002149    , L0002150    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:10:58

                                   PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


              1918000.   L0001876    , L0001877    , L0001878    , L0001879    ,
L0001880    , L0001881    , L0001882    ,
 L0001883    ,

             L0001884    , L0001885    , L0001886    , L0001887    , L0001888    ,
L0001889    , L0001890    , L0001891    ,

             L0001892    , L0001893    , L0001894    , L0001895    , L0001896    ,
L0001897    , L0001898    , L0001899    ,

             L0001900    , L0001901    , L0001902    , L0001903    , L0001904    ,
L0001905    , L0001906    , L0001907    ,

             L0001908    , L0001909    , L0001910    , L0001911    , L0001912    ,
L0001913    , L0001914    , L0001915    ,

             L0001916    , L0001917    , L0001918    , L0001919    , L0001920    ,
L0001921    , L0001922    , L0001923    ,

             L0001924    , L0001925    , L0001926    , L0001927    , L0001928    ,
L0001929    , L0001930    , L0001931    ,

             L0001932    , L0001933    , L0001934    , L0001935    , L0001936    ,
L0001937    , L0001938    , L0001939    ,

             L0001940    , L0001941    , L0001942    , L0001943    , L0001944    ,
L0001945    , L0001946    , L0001947    ,

             L0001948    , L0001949    , L0001950    , L0001951    , L0001952    ,
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L0001953    , L0001954    , L0001955    ,

             L0001956    , L0001957    , L0001958    , L0001959    , L0001960    ,
L0001961    , L0001962    , L0001963    ,

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L0001969    , L0001970    , L0001971    ,

             L0001972    , L0001973    , L0001974    , L0001975    , L0001976    ,
L0001977    , L0001978    , L0001979    ,

             L0001980    , L0001981    , L0001982    , L0001983    , L0001984    ,
L0001985    , L0001986    , L0001987    ,

             L0001988    , L0001989    , L0001990    , L0001991    , L0001992    ,
L0001993    , L0001994    , L0001995    ,

             L0001996    , L0001997    , L0001998    , L0001999    , L0002000    ,
L0002001    , L0002002    , L0002003    ,

             L0002004    , L0002005    , L0002006    , L0002007    , L0002008    ,
L0002009    , L0002010    , L0002011    ,

             L0002012    , L0002013    , L0002014    , L0002015    , L0002016    ,
L0002017    , L0002018    , L0002019    ,

             L0002020    , L0002021    , L0002022    , L0002023    , L0002024    ,
L0002025    , L0002026    , L0002027    ,

             L0002028    , L0002029    , L0002030    , L0002031    , L0002032    ,
L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------
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             L0002036    , L0002037    , L0002038    , L0002039    , L0002040    ,
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             L0002044    , L0002045    , L0002046    , L0002047    , L0002048    ,
L0002049    , L0002050    , L0002051    ,

             L0002052    , L0002053    , L0002054    , L0002055    , L0002056    ,
L0002057    , L0002058    , L0002059    ,

             L0002060    , L0002061    , L0002062    , L0002063    , L0002064    ,
L0002065    , L0002066    , L0002067    ,

             L0002068    , L0002069    , L0002070    , L0002071    , L0002072    ,
L0002073    , L0002074    , L0002075    ,

             L0002076    , L0002077    , L0002078    , L0002079    , L0002080    ,
L0002081    , L0002082    , L0002083    ,

             L0002084    , L0002085    , L0002086    , L0002087    , L0002088    ,
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             L0002092    , L0002093    , L0002094    , L0002095    , L0002096    ,
L0002097    , L0002098    , L0002099    ,

             L0002100    , L0002101    , L0002102    , L0002103    , L0002104    ,
L0002105    , L0002106    , L0002107    ,

             L0002108    , L0002109    , L0002110    , L0002111    , L0002112    ,
L0002113    , L0002114    , L0002115    ,

             L0002116    , L0002117    , L0002118    , L0002119    , L0002120    ,
L0002121    , L0002122    , L0002123    ,

             L0002124    , L0002125    , L0002126    , L0002127    , L0002128    ,
L0002129    , L0002130    , L0002131    ,

             L0002132    , L0002133    , L0002134    , L0002135    , L0002136    ,
L0002137    , L0002138    , L0002139    ,

             L0002140    , L0002141    , L0002142    , L0002143    , L0002144    ,
L0002145    , L0002146    , L0002147    ,

             L0002148    , L0002149    , L0002150    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:10:58
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                                 PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                              *** DISCRETE CARTESIAN RECEPTORS ***
                                            (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                           (METERS)

     ( 584511.4, 4131106.6,      89.6,      89.6,       0.0);         ( 584291.4,
4131146.6,      91.8,      91.8,       0.0);
     ( 584311.4, 4131146.6,      91.6,      91.6,       0.0);         ( 584331.4,
4131146.6,      91.5,      91.5,       0.0);
     ( 584351.4, 4131146.6,      91.1,      91.1,       0.0);         ( 584371.4,
4131146.6,      90.8,      90.8,       0.0);
     ( 584391.4, 4131146.6,      90.6,      90.6,       0.0);         ( 584411.4,
4131146.6,      90.5,      90.5,       0.0);
     ( 584431.4, 4131146.6,      90.4,      90.4,       0.0);         ( 584451.4,
4131146.6,      90.0,      90.0,       0.0);
     ( 584471.4, 4131146.6,      90.1,      90.1,       0.0);         ( 584491.4,
4131146.6,      89.8,      89.8,       0.0);
     ( 584511.4, 4131146.6,      89.3,      89.3,       0.0);         ( 584231.4,
4131166.6,      91.4,      91.4,       0.0);
     ( 584251.4, 4131166.6,      91.8,      91.8,       0.0);         ( 584271.4,
4131166.6,      91.6,      91.6,       0.0);
     ( 584291.4, 4131166.6,      91.5,      91.5,       0.0);         ( 584311.4,
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     ( 584331.4, 4131166.6,      91.3,      91.3,       0.0);         ( 584351.4,
4131166.6,      91.0,      91.0,       0.0);
     ( 584371.4, 4131166.6,      90.7,      90.7,       0.0);         ( 584391.4,
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     ( 584411.4, 4131166.6,      90.3,      90.3,       0.0);         ( 584431.4,
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     ( 584451.4, 4131166.6,      89.8,      89.8,       0.0);         ( 584471.4,
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     ( 584491.4, 4131166.6,      89.6,      89.6,       0.0);         ( 584511.4,
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     ( 584231.4, 4131186.6,      91.1,      91.1,       0.0);         ( 584251.4,
4131186.6,      91.5,      91.5,       0.0);
     ( 584271.4, 4131186.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131186.6,      91.3,      91.3,       0.0);
     ( 584311.4, 4131186.6,      91.3,      91.3,       0.0);         ( 584331.4,
4131186.6,      91.2,      91.2,       0.0);
     ( 584351.4, 4131186.6,      90.9,      90.9,       0.0);         ( 584371.4,
4131186.6,      90.8,      90.8,       0.0);
     ( 584391.4, 4131186.6,      90.5,      90.5,       0.0);         ( 584411.4,
4131186.6,      90.2,      90.2,       0.0);
     ( 584431.4, 4131186.6,      90.1,      90.1,       0.0);         ( 584451.4,
4131186.6,      89.6,      89.6,       0.0);
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     ( 584471.4, 4131186.6,      89.8,      89.8,      0.0);         ( 584491.4,
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     ( 584291.4, 4131206.6,      91.3,      91.3,      0.0);         ( 584311.4,
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     ( 584331.4, 4131206.6,      91.0,      91.0,      0.0);         ( 584351.4,
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     ( 584371.4, 4131206.6,      90.7,      90.7,      0.0);         ( 584391.4,
4131206.6,      90.5,      90.5,      0.0);
     ( 584411.4, 4131206.6,      90.2,      90.2,      0.0);         ( 584431.4,
4131206.6,      89.9,      89.9,      0.0);
     ( 584451.4, 4131206.6,      89.4,      89.4,      0.0);         ( 584471.4,
4131206.6,      89.3,      89.3,      0.0);
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4131226.6,      89.9,      92.6,      0.0);
     ( 584231.4, 4131226.6,      92.5,      92.5,      0.0);         ( 584251.4,
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     ( 584271.4, 4131226.6,      91.5,      91.5,      0.0);         ( 584291.4,
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     ( 584311.4, 4131226.6,      91.1,      91.1,      0.0);         ( 584331.4,
4131226.6,      90.8,      90.8,      0.0);
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     ( 584391.4, 4131226.6,      90.3,      90.3,      0.0);         ( 584411.4,
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     ( 584431.4, 4131226.6,      89.8,      89.8,      0.0);         ( 584451.4,
4131226.6,      89.1,      89.1,      0.0);
     ( 584471.4, 4131226.6,      89.0,      89.0,      0.0);         ( 584491.4,
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4131246.6,      92.5,      92.5,      0.0);
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     ( 584331.4, 4131246.6,      90.6,      90.6,      0.0);         ( 584351.4,
4131246.6,      90.4,      90.4,      0.0);
     ( 584371.4, 4131246.6,      90.1,      90.1,      0.0);         ( 584391.4,
4131246.6,      90.1,      90.1,      0.0);
     ( 584411.4, 4131246.6,      90.0,      90.0,      0.0);         ( 584431.4,
4131246.6,      89.7,      89.7,      0.0);
     ( 584451.4, 4131246.6,      88.8,      88.8,      0.0);         ( 584471.4,
4131246.6,      88.8,      88.8,      0.0);
     ( 584211.4, 4131266.6,      90.8,      92.8,      0.0);         ( 584231.4,
4131266.6,      92.6,      92.6,      0.0);
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     ( 584251.4, 4131266.6,      91.9,      91.9,       0.0);         ( 584271.4,
4131266.6,      91.5,      91.5,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                           (METERS)

     ( 584291.4, 4131266.6,      91.0,      91.0,       0.0);         ( 584211.4,
4131286.6,      91.8,      91.8,       0.0);
     ( 584231.4, 4131286.6,      92.5,      92.5,       0.0);         ( 584251.4,
4131286.6,      92.1,      92.1,       0.0);
     ( 584211.4, 4131306.6,      92.6,      92.6,       0.0);         ( 584231.4,
4131306.6,      92.3,      92.3,       0.0);
     ( 584191.4, 4131326.6,      89.8,      92.8,       0.0);         ( 584211.4,
4131326.6,      92.6,      92.6,       0.0);
     ( 584191.4, 4131346.6,      91.0,      91.0,       0.0);         ( 584171.4,
4131366.6,      91.8,      93.2,       0.0);
     ( 584191.4, 4131366.6,      93.0,      93.0,       0.0);

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                      * SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT
BE PERFORMED *
                        LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR
FASTAREA/FASTALL


                              SOURCE          - - RECEPTOR LOCATION - -
DISTANCE
                                ID           XR (METERS)   YR (METERS)
(METERS)
                            - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - -
```

```
                             L0002082            584511.4     4131106.6
-0.40
                             L0002083            584511.4     4131106.6
-10.29
                             L0002084            584511.4     4131106.6
0.62
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                       ***       17:10:58

                                 PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                               (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                            (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,
10.80,
♀ *** AERMOD - VERSION  18081 ***   ***
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C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                    *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   Met Data\745090.SFC
                  Met Version:  14134
   Profile file:   Met Data\745090.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:    23244                  Upper air station no.:    23230
                  Name: UNKNOWN                                   Name:
OAKLAND/WSO_AP
                  Year:   2009                                    Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01  -12.1  0.213 -9.000 -9.000 -999.  236.     72.6  0.09   0.54
1.00    2.86    1.   10.0  282.5    2.0
 09 01 01   1 02  -14.9  0.261 -9.000 -9.000 -999.  321.    109.2  0.09   0.54
1.00    3.36   18.   10.0  282.0    2.0
 09 01 01   1 03   -9.1  0.160 -9.000 -9.000 -999.  158.     40.7  0.09   0.54
1.00    2.36   24.   10.0  282.0    2.0
 09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.4    2.0
 09 01 01   1 05   -3.9  0.075 -9.000 -9.000 -999.   49.      9.8  0.09   0.54
1.00    1.76   23.   10.0  281.4    2.0
 09 01 01   1 06   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36    2.   10.0  280.9    2.0
 09 01 01   1 07   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36   15.   10.0  280.9    2.0
 09 01 01   1 08   -4.7  0.084 -9.000 -9.000 -999.   61.     11.7  0.15   0.54
0.73    1.76  323.   10.0  280.9    2.0
 09 01 01   1 09   -4.9  0.212 -9.000 -9.000 -999.  234.    179.0  0.15   0.54
0.38    2.36  357.   10.0  280.4    2.0
 09 01 01   1 10    5.7  0.163  0.241  0.014   89.  159.    -69.3  0.09   0.54
```

```
0.25    1.76   11.   10.0  280.9    2.0
 09 01 01   1 11   12.2 -9.000 -9.000 -9.000  158. -999. -99999.0  0.24   0.54
0.21    0.00    0.   10.0  280.9    2.0
 09 01 01   1 12   16.0  0.426  0.456  0.016  216.  668.   -442.4  0.15   0.54
0.19    4.36  346.   10.0  281.4    2.0
 09 01 01   1 13   16.6  0.236  0.493  0.015  263.  305.    -71.8  0.36   0.54
0.19    1.76  253.   10.0  281.4    2.0
 09 01 01   1 14   14.2 -9.000 -9.000 -9.000  297. -999. -99999.0  0.24   0.54
0.20    0.00    0.   10.0  282.0    2.0
 09 01 01   1 15   44.9 -9.000 -9.000 -9.000  387. -999. -99999.0  0.24   0.54
0.23    0.00    0.   10.0  283.8    2.0
 09 01 01   1 16   13.2 -9.000 -9.000 -9.000  410. -999. -99999.0  0.24   0.54
0.31    0.00    0.   10.0  284.1    2.0
 09 01 01   1 17  -12.3  0.130 -9.000 -9.000 -999.  112.     16.2  0.15   0.54
0.55    2.36  351.   10.0  282.1    2.0
 09 01 01   1 18   -9.3  0.106 -9.000 -9.000 -999.   83.     11.6  0.36   0.54
1.00    1.76  297.   10.0  282.1    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  280.1    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 09 01 01 01   10.0 1    1.    2.86   282.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
```

```
 , L0001878    , L0001879    , L0001880    ,
               L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
               L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
               L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         584511.38    4131106.65        0.00215                       584291.38
4131146.65        0.00138
         584311.38    4131146.65        0.00142                       584331.38
4131146.65        0.00145
         584351.38    4131146.65        0.00146                       584371.38
4131146.65        0.00147
         584391.38    4131146.65        0.00149                       584411.38
4131146.65        0.00152
         584431.38    4131146.65        0.00154                       584451.38
4131146.65        0.00155
         584471.38    4131146.65        0.00157                       584491.38
4131146.65        0.00158
         584511.38    4131146.65        0.00158                       584231.38
4131166.65        0.00081
         584251.38    4131166.65        0.00088                       584271.38
4131166.65        0.00093
         584291.38    4131166.65        0.00096                       584311.38
4131166.65        0.00099
         584331.38    4131166.65        0.00101                       584351.38
4131166.65        0.00103
         584371.38    4131166.65        0.00104                       584391.38
4131166.65        0.00105
         584411.38    4131166.65        0.00107                       584431.38
4131166.65        0.00108
         584451.38    4131166.65        0.00108                       584471.38
4131166.65        0.00110
         584491.38    4131166.65        0.00110                       584511.38
4131166.65        0.00110
         584231.38    4131186.65        0.00062                       584251.38
4131186.65        0.00067
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         584271.38    4131186.65         0.00070                            584291.38
4131186.65         0.00073
         584311.38    4131186.65         0.00075                            584331.38
4131186.65         0.00077
         584351.38    4131186.65         0.00079                            584371.38
4131186.65         0.00080
         584391.38    4131186.65         0.00081                            584411.38
4131186.65         0.00081
         584431.38    4131186.65         0.00082                            584451.38
4131186.65         0.00082
         584471.38    4131186.65         0.00083                            584491.38
4131186.65         0.00083
         584511.38    4131186.65         0.00083                            584231.38
4131206.65         0.00051
         584251.38    4131206.65         0.00054                            584271.38
4131206.65         0.00056
         584291.38    4131206.65         0.00058                            584311.38
4131206.65         0.00060
         584331.38    4131206.65         0.00062                            584351.38
4131206.65         0.00063
         584371.38    4131206.65         0.00064                            584391.38
4131206.65         0.00065
         584411.38    4131206.65         0.00065                            584431.38
4131206.65         0.00066
         584451.38    4131206.65         0.00066                            584471.38
4131206.65         0.00066
         584491.38    4131206.65         0.00066                            584211.38
4131226.65         0.00039
         584231.38    4131226.65         0.00042                            584251.38
4131226.65         0.00045
         584271.38    4131226.65         0.00047                            584291.38
4131226.65         0.00048
         584311.38    4131226.65         0.00050                            584331.38
4131226.65         0.00051
         584351.38    4131226.65         0.00052                            584371.38
4131226.65         0.00053
         584391.38    4131226.65         0.00053                            584411.38
4131226.65         0.00054
         584431.38    4131226.65         0.00054                            584451.38
4131226.65         0.00054
         584471.38    4131226.65         0.00054                            584491.38
4131226.65         0.00054
         584211.38    4131246.65         0.00034                            584231.38
4131246.65         0.00036
         584251.38    4131246.65         0.00038                            584271.38
4131246.65         0.00040
         584291.38    4131246.65         0.00041                            584311.38
4131246.65         0.00042
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         584331.38    4131246.65        0.00043                      584351.38
4131246.65        0.00044
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                    INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         584371.38    4131246.65        0.00045                      584391.38
4131246.65        0.00045
         584411.38    4131246.65        0.00046                      584431.38
4131246.65        0.00046
         584451.38    4131246.65        0.00046                      584471.38
4131246.65        0.00046
         584211.38    4131266.65        0.00030                      584231.38
4131266.65        0.00032
         584251.38    4131266.65        0.00033                      584271.38
4131266.65        0.00035
         584291.38    4131266.65        0.00036                      584211.38
4131286.65        0.00027
         584231.38    4131286.65        0.00028                      584251.38
4131286.65        0.00029
         584211.38    4131306.65        0.00024                      584231.38
4131306.65        0.00025
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         584191.38    4131326.65        0.00021                      584211.38
4131326.65        0.00022
         584191.38    4131346.65        0.00019                      584171.38
4131366.65        0.00017
         584191.38    4131366.65        0.00018

♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)             X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584511.38   4131106.65       0.00698  (11022822)               584291.38
 4131146.65       0.00590  (11011505)
        584311.38   4131146.65       0.00595  (09021919)               584331.38
 4131146.65       0.00600  (09021919)
        584351.38   4131146.65       0.00599  (09021919)               584371.38
 4131146.65       0.00599  (09021919)
        584391.38   4131146.65       0.00603  (09021919)               584411.38
 4131146.65       0.00607  (09021919)
        584431.38   4131146.65       0.00609  (09021919)               584451.38
 4131146.65       0.00608  (09021919)
        584471.38   4131146.65       0.00611  (09021919)               584491.38
 4131146.65       0.00611  (10120502)
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       584511.38   4131146.65        0.00609  (10120502)                584231.38
4131166.65        0.00416  (09021919)
       584251.38   4131166.65        0.00430  (09021919)                584271.38
4131166.65        0.00437  (09021919)
       584291.38   4131166.65        0.00442  (09021919)                584311.38
4131166.65        0.00448  (12120320)
       584331.38   4131166.65        0.00452  (12120320)                584351.38
4131166.65        0.00454  (12120320)
       584371.38   4131166.65        0.00456  (12120320)                584391.38
4131166.65        0.00458  (12120320)
       584411.38   4131166.65        0.00459  (12120320)                584431.38
4131166.65        0.00461  (12120320)
       584451.38   4131166.65        0.00459  (12120320)                584471.38
4131166.65        0.00461  (12120320)
       584491.38   4131166.65        0.00458  (12120320)                584511.38
4131166.65        0.00453  (12120320)
       584231.38   4131186.65        0.00340  (12120320)                584251.38
4131186.65        0.00350  (12120320)
       584271.38   4131186.65        0.00356  (12120320)                584291.38
4131186.65        0.00361  (12120320)
       584311.38   4131186.65        0.00364  (12120320)                584331.38
4131186.65        0.00367  (12120320)
       584351.38   4131186.65        0.00369  (12120320)                584371.38
4131186.65        0.00370  (12120320)
       584391.38   4131186.65        0.00370  (12120320)                584411.38
4131186.65        0.00370  (12120320)
       584431.38   4131186.65        0.00369  (12120320)                584451.38
4131186.65        0.00366  (12120320)
       584471.38   4131186.65        0.00364  (12120320)                584491.38
4131186.65        0.00362  (12010208)
       584511.38   4131186.65        0.00358  (12010208)                584231.38
4131206.65        0.00292  (12120320)
       584251.38   4131206.65        0.00296  (12120320)                584271.38
4131206.65        0.00300  (12120320)
       584291.38   4131206.65        0.00303  (12120320)                584311.38
4131206.65        0.00306  (12120320)
       584331.38   4131206.65        0.00307  (12120320)                584351.38
4131206.65        0.00308  (12120320)
       584371.38   4131206.65        0.00308  (12120320)                584391.38
4131206.65        0.00307  (12120320)
       584411.38   4131206.65        0.00306  (12010208)                584431.38
4131206.65        0.00305  (12010208)
       584451.38   4131206.65        0.00303  (12010208)                584471.38
4131206.65        0.00301  (10013002)
       584491.38   4131206.65        0.00299  (10013002)                584211.38
4131226.65        0.00245  (12120320)
       584231.38   4131226.65        0.00252  (12120320)                584251.38
4131226.65        0.00256  (12120320)
```

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        584271.38   4131226.65        0.00258  (12120320)                584291.38
 4131226.65        0.00260  (12120320)
        584311.38   4131226.65        0.00261  (12120320)                584331.38
 4131226.65        0.00261  (12120320)
        584351.38   4131226.65        0.00262  (12010208)                584371.38
 4131226.65        0.00262  (12010208)
        584391.38   4131226.65        0.00262  (12010208)                584411.38
 4131226.65        0.00261  (12010208)
        584431.38   4131226.65        0.00261  (10013002)                584451.38
 4131226.65        0.00259  (10013002)
        584471.38   4131226.65        0.00259  (11021419)                584491.38
 4131226.65        0.00257  (11021419)
        584211.38   4131246.65        0.00217  (12120320)                584231.38
 4131246.65        0.00222  (12120320)
        584251.38   4131246.65        0.00224  (12120320)                584271.38
 4131246.65        0.00225  (12120320)
        584291.38   4131246.65        0.00227  (12010208)                584311.38
 4131246.65        0.00228  (12010208)
        584331.38   4131246.65        0.00229  (12010208)                584351.38
 4131246.65        0.00229  (12010208)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
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 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
       584371.38   4131246.65       0.00229  (10013002)               584391.38
 4131246.65       0.00229  (10013002)
       584411.38   4131246.65       0.00230  (11021419)               584431.38
 4131246.65       0.00230  (11021419)
       584451.38   4131246.65       0.00228  (11021419)               584471.38
 4131246.65       0.00228  (11021419)
       584211.38   4131266.65       0.00195  (12120320)               584231.38
 4131266.65       0.00199  (12120320)
       584251.38   4131266.65       0.00199  (12010208)               584271.38
 4131266.65       0.00201  (12010208)
       584291.38   4131266.65       0.00202  (12010208)               584211.38
 4131286.65       0.00177  (12010208)
       584231.38   4131286.65       0.00179  (12120320)               584251.38
 4131286.65       0.00179  (12010208)
       584211.38   4131306.65       0.00163  (12120320)               584231.38
 4131306.65       0.00162  (12010208)
       584191.38   4131326.65       0.00148  (10013002)               584211.38
 4131326.65       0.00150  (12120320)
       584191.38   4131346.65       0.00139  (11021419)               584171.38
 4131366.65       0.00129  (11021419)
       584191.38   4131366.65       0.00134  (09123123)

♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
```

```
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584511.38   4131106.65        0.00402b (09112324)                584291.38
 4131146.65        0.00311b (13111924)
        584311.38   4131146.65        0.00318b (13111924)                584331.38
 4131146.65        0.00323b (13111924)
        584351.38   4131146.65        0.00323b (13111924)                584371.38
 4131146.65        0.00324b (13111924)
        584391.38   4131146.65        0.00328b (13111924)                584411.38
 4131146.65        0.00333b (13111924)
        584431.38   4131146.65        0.00336b (13111924)                584451.38
 4131146.65        0.00337b (13111924)
        584471.38   4131146.65        0.00343b (13111924)                584491.38
 4131146.65        0.00344b (13111924)
        584511.38   4131146.65        0.00343b (13111924)                584231.38
 4131166.65        0.00212b (13111924)
        584251.38   4131166.65        0.00223b (13111924)                584271.38
 4131166.65        0.00229b (13111924)
        584291.38   4131166.65        0.00234b (13111924)                584311.38
 4131166.65        0.00239b (13111924)
        584331.38   4131166.65        0.00243b (13111924)                584351.38
 4131166.65        0.00245b (13111924)
        584371.38   4131166.65        0.00246b (13111924)                584391.38
 4131166.65        0.00248b (13111924)
        584411.38   4131166.65        0.00250b (13111924)                584431.38
 4131166.65        0.00252b (13111924)
        584451.38   4131166.65        0.00252b (13111924)                584471.38
 4131166.65        0.00256b (13111924)
        584491.38   4131166.65        0.00256b (13111924)                584511.38
 4131166.65        0.00255b (13111924)
        584231.38   4131186.65        0.00171b (13111924)                584251.38
 4131186.65        0.00178b (13111924)
        584271.38   4131186.65        0.00183b (13111924)                584291.38
 4131186.65        0.00188b (13111924)
        584311.38   4131186.65        0.00191b (13111924)                584331.38
 4131186.65        0.00194b (13111924)
        584351.38   4131186.65        0.00196b (13111924)                584371.38
 4131186.65        0.00198b (13111924)
        584391.38   4131186.65        0.00199b (13111924)                584411.38
 4131186.65        0.00200b (13111924)
        584431.38   4131186.65        0.00201b (13111924)                584451.38
 4131186.65        0.00200b (13111924)
        584471.38   4131186.65        0.00202b (13111924)                584491.38
 4131186.65        0.00202b (13111924)
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       584511.38   4131186.65        0.00200b (13111924)                584231.38
 4131206.65        0.00150b (10012224)
       584251.38   4131206.65        0.00152b (10012224)                584271.38
 4131206.65        0.00155b (10012224)
       584291.38   4131206.65        0.00157b (10012224)                584311.38
 4131206.65        0.00159b (10012224)
       584331.38   4131206.65        0.00161b (13111924)                584351.38
 4131206.65        0.00162b (13111924)
       584371.38   4131206.65        0.00164b (13111924)                584391.38
 4131206.65        0.00165b (13111924)
       584411.38   4131206.65        0.00165b (13111924)                584431.38
 4131206.65        0.00165b (13111924)
       584451.38   4131206.65        0.00165b (13111924)                584471.38
 4131206.65        0.00165b (13111924)
       584491.38   4131206.65        0.00164b (13111924)                584211.38
 4131226.65        0.00123b (10012224)
       584231.38   4131226.65        0.00132b (10012224)                584251.38
 4131226.65        0.00134b (10012224)
       584271.38   4131226.65        0.00136b (10012224)                584291.38
 4131226.65        0.00138b (10012224)
       584311.38   4131226.65        0.00139b (10012224)                584331.38
 4131226.65        0.00140b (10012224)
       584351.38   4131226.65        0.00141b (10012224)                584371.38
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       584391.38   4131226.65        0.00142b (10012224)                584411.38
 4131226.65        0.00142b (10012224)
       584431.38   4131226.65        0.00142b (10012224)                584451.38
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       584471.38   4131226.65        0.00141b (10012224)                584491.38
 4131226.65        0.00140b (10012224)
       584211.38   4131246.65        0.00110b (10012224)                584231.38
 4131246.65        0.00118b (10012224)
       584251.38   4131246.65        0.00120b (10012224)                584271.38
 4131246.65        0.00121b (10012224)
       584291.38   4131246.65        0.00122b (10012224)                584311.38
 4131246.65        0.00123b (10012224)
       584331.38   4131246.65        0.00124b (10012224)                584351.38
 4131246.65        0.00124b (10012224)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:10:58

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
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VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
        584371.38   4131246.65        0.00125b (10012224)                584391.38
 4131246.65        0.00125b (10012224)
        584411.38   4131246.65        0.00126b (10012224)                584431.38
 4131246.65        0.00125b (10012224)
        584451.38   4131246.65        0.00124b (10012224)                584471.38
 4131246.65        0.00123b (10012224)
        584211.38   4131266.65        0.00102b (10012224)                584231.38
 4131266.65        0.00106b (10012224)
        584251.38   4131266.65        0.00108b (10012224)                584271.38
 4131266.65        0.00109b (10012224)
        584291.38   4131266.65        0.00110b (10012224)                584211.38
 4131286.65        0.00095b (10012224)
        584231.38   4131286.65        0.00097b (10012224)                584251.38
 4131286.65        0.00098b (10012224)
        584211.38   4131306.65        0.00087b (10012224)                584231.38
 4131306.65        0.00089b (10012224)
        584191.38   4131326.65        0.00078b (10012224)                584211.38
 4131326.65        0.00081b (10012224)
        584191.38   4131346.65        0.00074b (10012224)                584171.38
 4131366.65        0.00067b (10012224)
        584191.38   4131366.65        0.00069b (10012224)

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:10:58
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                                PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***


                                 ** CONC OF PM_10    IN MICROGRAMS/M**3
                **


                         NETWORK
GROUP ID                       AVERAGE CONC               RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -


ALL       1ST HIGHEST VALUE IS       0.00215 AT (  584511.38,  4131106.65,
89.58,    89.58,    0.00)  DC
          2ND HIGHEST VALUE IS       0.00158 AT (  584491.38,  4131146.65,
89.80,    89.80,    0.00)  DC
          3RD HIGHEST VALUE IS       0.00158 AT (  584511.38,  4131146.65,
89.29,    89.29,    0.00)  DC
          4TH HIGHEST VALUE IS       0.00157 AT (  584471.38,  4131146.65,
90.08,    90.08,    0.00)  DC
          5TH HIGHEST VALUE IS       0.00155 AT (  584451.38,  4131146.65,
90.04,    90.04,    0.00)  DC
          6TH HIGHEST VALUE IS       0.00154 AT (  584431.38,  4131146.65,
90.39,    90.39,    0.00)  DC
          7TH HIGHEST VALUE IS       0.00152 AT (  584411.38,  4131146.65,
90.54,    90.54,    0.00)  DC
          8TH HIGHEST VALUE IS       0.00149 AT (  584391.38,  4131146.65,
90.61,    90.61,    0.00)  DC
          9TH HIGHEST VALUE IS       0.00147 AT (  584371.38,  4131146.65,
90.75,    90.75,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00146 AT (  584351.38,  4131146.65,
91.09,    91.09,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                         ***        17:10:58
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                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                ***  THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
                **

                                                          DATE
                                              NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.00698  ON 11022822: AT (  584511.38,
4131106.65,    89.58,    89.58,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***       17:10:58

                                   PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                ***  THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
                **

                                                          DATE
                                              NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
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ALL      HIGH   1ST HIGH VALUE IS       0.00402b ON 09112324: AT (  584511.38,
4131106.65,    89.58,    89.58,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:10:58

                                   PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of          182 Warning Message(s)
 A Total of        15496 Informational Message(s)

 A Total of        43872 Hours Were Processed

 A Total of        14061 Calm Hours Identified

 A Total of         1435 Missing Hours Identified (  3.27 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 SO W320     386        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     387        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     388        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     389        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     390        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     391        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     392        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     393        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     394        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     395        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     396        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     397        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     398        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     400        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     401        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     402        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     403        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     404        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     405        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     414        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     415        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     516        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     517        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     518        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     519        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     520        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     521        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     522        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     523        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     524        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     525        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     526        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     527        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     528        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     529        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     530        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     531        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     532        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     533        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     534        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     535        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
SO W320     536        VPARM: Input Parameter May Be Out-of-Range for Parameter
      QS
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SO W320     537        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     538        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     539        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     540        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     541        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     542        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     543        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     544        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     545        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     546        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     547        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     548        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     549        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     550        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     551        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     552        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     553        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     554        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     555        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     556        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     557        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     558        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     559        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     560        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     561        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     562        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     563        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     564        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     565        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     566        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     567        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     568        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
MX W481   43873         MAIN: Data Remaining After End of Year. Number of Hours=
       48

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

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**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/22/2018
** File:
C:\Users\ace.malisos\Desktop\Westport\Westport_StevensCrk_PM2\Westport_StevensCrk_P
M2.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_2.5
   RUNORNOT RUN
   ERRORFIL Westport_StevensCrk_PM2.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ---------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
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** 584318.073, 4130698.556, 91.70, 4.15, 5.58
** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0002058     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0002059     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0002060     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0002061     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0002062     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0002063     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0002064     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0002065     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0002066     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0002067     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0002068     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0002069     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0002070     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0002071     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0002072     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0002073     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0002074     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0002075     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0002076     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0002077     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0002078     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0002079     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0002080     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0002081     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0002082     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0002083     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0002084     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0002085     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0002086     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0002087     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0002088     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0002089     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0002090     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0002091     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0002092     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0002093     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0002094     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0002095     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0002096     VOLUME   584171.753 4131148.048 86.71
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LOCATION L0002097     VOLUME   584169.465 4131159.828 86.73
LOCATION L0002098     VOLUME   584167.177 4131171.608 86.78
LOCATION L0002099     VOLUME   584164.889 4131183.388 86.89
LOCATION L0002100     VOLUME   584162.601 4131195.168 87.07
LOCATION L0002101     VOLUME   584160.314 4131206.948 87.20
LOCATION L0002102     VOLUME   584158.026 4131218.728 87.26
LOCATION L0002103     VOLUME   584155.738 4131230.508 87.26
LOCATION L0002104     VOLUME   584153.450 4131242.288 87.31
LOCATION L0002105     VOLUME   584151.162 4131254.067 87.39
LOCATION L0002106     VOLUME   584148.874 4131265.847 87.49
LOCATION L0002107     VOLUME   584146.587 4131277.627 87.61
LOCATION L0002108     VOLUME   584144.299 4131289.407 87.75
LOCATION L0002109     VOLUME   584142.011 4131301.187 87.91
LOCATION L0002110     VOLUME   584139.723 4131312.967 88.13
LOCATION L0002111     VOLUME   584137.435 4131324.747 88.36
LOCATION L0002112     VOLUME   584135.147 4131336.527 88.59
LOCATION L0002113     VOLUME   584132.860 4131348.307 88.71
LOCATION L0002114     VOLUME   584130.572 4131360.086 88.78
LOCATION L0002115     VOLUME   584128.284 4131371.866 88.89
LOCATION L0002116     VOLUME   584125.996 4131383.646 89.05
LOCATION L0002117     VOLUME   584123.708 4131395.426 89.20
LOCATION L0002118     VOLUME   584121.420 4131407.206 89.43
LOCATION L0002119     VOLUME   584119.133 4131418.986 89.62
LOCATION L0002120     VOLUME   584116.845 4131430.766 89.79
LOCATION L0002121     VOLUME   584114.557 4131442.546 89.95
LOCATION L0002122     VOLUME   584112.269 4131454.326 90.11
LOCATION L0002123     VOLUME   584109.293 4131465.928 90.22
LOCATION L0002124     VOLUME   584105.608 4131477.349 90.30
LOCATION L0002125     VOLUME   584101.924 4131488.769 90.39
LOCATION L0002126     VOLUME   584098.240 4131500.190 90.51
LOCATION L0002127     VOLUME   584094.556 4131511.610 90.63
LOCATION L0002128     VOLUME   584090.872 4131523.031 90.74
LOCATION L0002129     VOLUME   584087.188 4131534.451 90.87
LOCATION L0002130     VOLUME   584083.504 4131545.872 91.02
LOCATION L0002131     VOLUME   584079.361 4131557.129 91.15
LOCATION L0002132     VOLUME   584075.011 4131568.313 91.26
LOCATION L0002133     VOLUME   584070.662 4131579.497 91.38
LOCATION L0002134     VOLUME   584066.313 4131590.681 91.51
LOCATION L0002135     VOLUME   584061.963 4131601.865 91.67
LOCATION L0002136     VOLUME   584057.614 4131613.049 91.85
LOCATION L0002137     VOLUME   584053.265 4131624.233 91.95
LOCATION L0002138     VOLUME   584048.915 4131635.417 92.02
LOCATION L0002139     VOLUME   584044.566 4131646.601 92.13
LOCATION L0002140     VOLUME   584040.216 4131657.785 92.25
LOCATION L0002141     VOLUME   584035.867 4131668.969 92.38
LOCATION L0002142     VOLUME   584031.229 4131680.004 92.43
LOCATION L0002143     VOLUME   584024.573 4131689.988 92.52
LOCATION L0002144     VOLUME   584017.917 4131699.973 92.55
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   LOCATION L0002145     VOLUME   584011.260 4131709.957 92.56
   LOCATION L0002146     VOLUME   584004.604 4131719.942 92.58
   LOCATION L0002147     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
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** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0002149     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0002150     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0002151     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0002152     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0002153     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0002154     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0002155     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0002156     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0002157     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0002158     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0002159     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0002160     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0002161     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0002162     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0002163     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0002164     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0002165     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0002166     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0002167     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0002168     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0002169     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0002170     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0002171     VOLUME   584083.695 4131473.879 89.42
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LOCATION L0002172     VOLUME   584086.826 4131462.295 89.31
LOCATION L0002173     VOLUME   584089.956 4131450.711 89.21
LOCATION L0002174     VOLUME   584093.087 4131439.126 89.11
LOCATION L0002175     VOLUME   584096.218 4131427.542 89.02
LOCATION L0002176     VOLUME   584099.349 4131415.958 89.17
LOCATION L0002177     VOLUME   584102.480 4131404.373 89.16
LOCATION L0002178     VOLUME   584105.611 4131392.789 88.97
LOCATION L0002179     VOLUME   584108.742 4131381.204 88.86
LOCATION L0002180     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002181     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002182     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002183     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002184     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002185     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002186     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002187     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002188     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002189     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002190     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002191     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002192     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002193     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002194     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002195     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002196     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002197     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002198     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002199     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002200     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002201     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002202     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002203     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002204     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002205     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002206     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002207     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002208     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002209     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002210     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002211     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002212     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002213     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002214     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002215     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002216     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002217     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002218     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002219     VOLUME   584213.760 4130913.195 89.97
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   LOCATION L0002220     VOLUME   584217.097 4130901.668 90.14
   LOCATION L0002221     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002222     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002223     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002224     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002225     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002226     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002227     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002228     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002229     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002230     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002231     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002232     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002233     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002234     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002235     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002236     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002237     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0002003
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 4.15, 5.58
** 584356.298, 4131105.625, 91.89, 4.15, 5.58
** 584754.237, 4131112.421, 86.16, 4.15, 5.58
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   LOCATION L0002333     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0002334     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0002335     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0002336     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0002337     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0002338     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0002339     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0002340     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0002341     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0002342     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0002343     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0002344     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0002345     VOLUME   584355.888 4131105.614 91.93
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   LOCATION L0002346     VOLUME   584367.886 4131105.823 91.93
   LOCATION L0002347     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0002348     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0002349     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0002350     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0002351     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0002352     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0002353     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0002354     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0002355     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0002356     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0002357     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0002358     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0002359     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0002360     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0002361     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0002362     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0002363     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0002364     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0002365     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0002366     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0002367     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0002368     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0002369     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0002370     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0002371     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0002372     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0002373     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0002374     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0002375     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0002376     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0002377     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0002378     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0002003
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 4.15, 5.58
** 584374.420, 4131122.992, 91.63, 4.15, 5.58
** 584190.176, 4131122.237, 90.97, 4.15, 5.58
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   LOCATION L0002379     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0002380     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0002381     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0002382     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0002383     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0002384     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0002385     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0002386     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0002387     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0002388     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0002389     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0002390     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0002391     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0002392     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0002393     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0002394     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0002395     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0002396     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0002397     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0002398     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0002399     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0002400     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0002401     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0002402     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0002403     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0002404     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0002405     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0002406     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0002407     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0002408     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0002409     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0002410     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0002411     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0002412     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0002413     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0002414     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0002415     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0002416     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0002417     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0002418     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0002419     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0002420     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0002421     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0002422     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0002423     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0002424     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0002425     VOLUME   584197.775 4131122.268 89.75
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** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0002057           0.0      4.15       5.58       2.93
   SRCPARAM L0002058           0.0      4.15       5.58       2.93
   SRCPARAM L0002059           0.0      4.15       5.58       2.93
   SRCPARAM L0002060           0.0      4.15       5.58       2.93
   SRCPARAM L0002061           0.0      4.15       5.58       2.93
   SRCPARAM L0002062           0.0      4.15       5.58       2.93
   SRCPARAM L0002063           0.0      4.15       5.58       2.93
   SRCPARAM L0002064           0.0      4.15       5.58       2.93
   SRCPARAM L0002065           0.0      4.15       5.58       2.93
   SRCPARAM L0002066           0.0      4.15       5.58       2.93
   SRCPARAM L0002067           0.0      4.15       5.58       2.93
   SRCPARAM L0002068           0.0      4.15       5.58       2.93
   SRCPARAM L0002069           0.0      4.15       5.58       2.93
   SRCPARAM L0002070           0.0      4.15       5.58       2.93
   SRCPARAM L0002071           0.0      4.15       5.58       2.93
   SRCPARAM L0002072           0.0      4.15       5.58       2.93
   SRCPARAM L0002073           0.0      4.15       5.58       2.93
   SRCPARAM L0002074           0.0      4.15       5.58       2.93
   SRCPARAM L0002075           0.0      4.15       5.58       2.93
   SRCPARAM L0002076           0.0      4.15       5.58       2.93
   SRCPARAM L0002077           0.0      4.15       5.58       2.93
   SRCPARAM L0002078           0.0      4.15       5.58       2.93
   SRCPARAM L0002079           0.0      4.15       5.58       2.93
   SRCPARAM L0002080           0.0      4.15       5.58       2.93
   SRCPARAM L0002081           0.0      4.15       5.58       2.93
   SRCPARAM L0002082           0.0      4.15       5.58       2.93
   SRCPARAM L0002083           0.0      4.15       5.58       2.93
   SRCPARAM L0002084           0.0      4.15       5.58       2.93
   SRCPARAM L0002085           0.0      4.15       5.58       2.93
   SRCPARAM L0002086           0.0      4.15       5.58       2.93
   SRCPARAM L0002087           0.0      4.15       5.58       2.93
   SRCPARAM L0002088           0.0      4.15       5.58       2.93
   SRCPARAM L0002089           0.0      4.15       5.58       2.93
   SRCPARAM L0002090           0.0      4.15       5.58       2.93
   SRCPARAM L0002091           0.0      4.15       5.58       2.93
   SRCPARAM L0002092           0.0      4.15       5.58       2.93
   SRCPARAM L0002093           0.0      4.15       5.58       2.93
   SRCPARAM L0002094           0.0      4.15       5.58       2.93
   SRCPARAM L0002095           0.0      4.15       5.58       2.93
   SRCPARAM L0002096           0.0      4.15       5.58       2.93
   SRCPARAM L0002097           0.0      4.15       5.58       2.93
   SRCPARAM L0002098           0.0      4.15       5.58       2.93
   SRCPARAM L0002099           0.0      4.15       5.58       2.93
   SRCPARAM L0002100           0.0      4.15       5.58       2.93
   SRCPARAM L0002101           0.0      4.15       5.58       2.93
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   SRCPARAM L0002102          0.0      4.15      5.58      2.93
   SRCPARAM L0002103          0.0      4.15      5.58      2.93
   SRCPARAM L0002104          0.0      4.15      5.58      2.93
   SRCPARAM L0002105          0.0      4.15      5.58      2.93
   SRCPARAM L0002106          0.0      4.15      5.58      2.93
   SRCPARAM L0002107          0.0      4.15      5.58      2.93
   SRCPARAM L0002108          0.0      4.15      5.58      2.93
   SRCPARAM L0002109          0.0      4.15      5.58      2.93
   SRCPARAM L0002110          0.0      4.15      5.58      2.93
   SRCPARAM L0002111          0.0      4.15      5.58      2.93
   SRCPARAM L0002112          0.0      4.15      5.58      2.93
   SRCPARAM L0002113          0.0      4.15      5.58      2.93
   SRCPARAM L0002114          0.0      4.15      5.58      2.93
   SRCPARAM L0002115          0.0      4.15      5.58      2.93
   SRCPARAM L0002116          0.0      4.15      5.58      2.93
   SRCPARAM L0002117          0.0      4.15      5.58      2.93
   SRCPARAM L0002118          0.0      4.15      5.58      2.93
   SRCPARAM L0002119          0.0      4.15      5.58      2.93
   SRCPARAM L0002120          0.0      4.15      5.58      2.93
   SRCPARAM L0002121          0.0      4.15      5.58      2.93
   SRCPARAM L0002122          0.0      4.15      5.58      2.93
   SRCPARAM L0002123          0.0      4.15      5.58      2.93
   SRCPARAM L0002124          0.0      4.15      5.58      2.93
   SRCPARAM L0002125          0.0      4.15      5.58      2.93
   SRCPARAM L0002126          0.0      4.15      5.58      2.93
   SRCPARAM L0002127          0.0      4.15      5.58      2.93
   SRCPARAM L0002128          0.0      4.15      5.58      2.93
   SRCPARAM L0002129          0.0      4.15      5.58      2.93
   SRCPARAM L0002130          0.0      4.15      5.58      2.93
   SRCPARAM L0002131          0.0      4.15      5.58      2.93
   SRCPARAM L0002132          0.0      4.15      5.58      2.93
   SRCPARAM L0002133          0.0      4.15      5.58      2.93
   SRCPARAM L0002134          0.0      4.15      5.58      2.93
   SRCPARAM L0002135          0.0      4.15      5.58      2.93
   SRCPARAM L0002136          0.0      4.15      5.58      2.93
   SRCPARAM L0002137          0.0      4.15      5.58      2.93
   SRCPARAM L0002138          0.0      4.15      5.58      2.93
   SRCPARAM L0002139          0.0      4.15      5.58      2.93
   SRCPARAM L0002140          0.0      4.15      5.58      2.93
   SRCPARAM L0002141          0.0      4.15      5.58      2.93
   SRCPARAM L0002142          0.0      4.15      5.58      2.93
   SRCPARAM L0002143          0.0      4.15      5.58      2.93
   SRCPARAM L0002144          0.0      4.15      5.58      2.93
   SRCPARAM L0002145          0.0      4.15      5.58      2.93
   SRCPARAM L0002146          0.0      4.15      5.58      2.93
   SRCPARAM L0002147          0.0      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
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SRCPARAM L0002148          0.0      4.15      5.58      3.21
SRCPARAM L0002149          0.0      4.15      5.58      3.21
SRCPARAM L0002150          0.0      4.15      5.58      3.21
SRCPARAM L0002151          0.0      4.15      5.58      3.21
SRCPARAM L0002152          0.0      4.15      5.58      3.21
SRCPARAM L0002153          0.0      4.15      5.58      3.21
SRCPARAM L0002154          0.0      4.15      5.58      3.21
SRCPARAM L0002155          0.0      4.15      5.58      3.21
SRCPARAM L0002156          0.0      4.15      5.58      3.21
SRCPARAM L0002157          0.0      4.15      5.58      3.21
SRCPARAM L0002158          0.0      4.15      5.58      3.21
SRCPARAM L0002159          0.0      4.15      5.58      3.21
SRCPARAM L0002160          0.0      4.15      5.58      3.21
SRCPARAM L0002161          0.0      4.15      5.58      3.21
SRCPARAM L0002162          0.0      4.15      5.58      3.21
SRCPARAM L0002163          0.0      4.15      5.58      3.21
SRCPARAM L0002164          0.0      4.15      5.58      3.21
SRCPARAM L0002165          0.0      4.15      5.58      3.21
SRCPARAM L0002166          0.0      4.15      5.58      3.21
SRCPARAM L0002167          0.0      4.15      5.58      3.21
SRCPARAM L0002168          0.0      4.15      5.58      3.21
SRCPARAM L0002169          0.0      4.15      5.58      3.21
SRCPARAM L0002170          0.0      4.15      5.58      3.21
SRCPARAM L0002171          0.0      4.15      5.58      3.21
SRCPARAM L0002172          0.0      4.15      5.58      3.21
SRCPARAM L0002173          0.0      4.15      5.58      3.21
SRCPARAM L0002174          0.0      4.15      5.58      3.21
SRCPARAM L0002175          0.0      4.15      5.58      3.21
SRCPARAM L0002176          0.0      4.15      5.58      3.21
SRCPARAM L0002177          0.0      4.15      5.58      3.21
SRCPARAM L0002178          0.0      4.15      5.58      3.21
SRCPARAM L0002179          0.0      4.15      5.58      3.21
SRCPARAM L0002180          0.0      4.15      5.58      3.21
SRCPARAM L0002181          0.0      4.15      5.58      3.21
SRCPARAM L0002182          0.0      4.15      5.58      3.21
SRCPARAM L0002183          0.0      4.15      5.58      3.21
SRCPARAM L0002184          0.0      4.15      5.58      3.21
SRCPARAM L0002185          0.0      4.15      5.58      3.21
SRCPARAM L0002186          0.0      4.15      5.58      3.21
SRCPARAM L0002187          0.0      4.15      5.58      3.21
SRCPARAM L0002188          0.0      4.15      5.58      3.21
SRCPARAM L0002189          0.0      4.15      5.58      3.21
SRCPARAM L0002190          0.0      4.15      5.58      3.21
SRCPARAM L0002191          0.0      4.15      5.58      3.21
SRCPARAM L0002192          0.0      4.15      5.58      3.21
SRCPARAM L0002193          0.0      4.15      5.58      3.21
SRCPARAM L0002194          0.0      4.15      5.58      3.21
SRCPARAM L0002195          0.0      4.15      5.58      3.21
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   SRCPARAM L0002196           0.0      4.15      5.58      3.21
   SRCPARAM L0002197           0.0      4.15      5.58      3.21
   SRCPARAM L0002198           0.0      4.15      5.58      3.21
   SRCPARAM L0002199           0.0      4.15      5.58      3.21
   SRCPARAM L0002200           0.0      4.15      5.58      3.21
   SRCPARAM L0002201           0.0      4.15      5.58      3.21
   SRCPARAM L0002202           0.0      4.15      5.58      3.21
   SRCPARAM L0002203           0.0      4.15      5.58      3.21
   SRCPARAM L0002204           0.0      4.15      5.58      3.21
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   SRCPARAM L0002206           0.0      4.15      5.58      3.21
   SRCPARAM L0002207           0.0      4.15      5.58      3.21
   SRCPARAM L0002208           0.0      4.15      5.58      3.21
   SRCPARAM L0002209           0.0      4.15      5.58      3.21
   SRCPARAM L0002210           0.0      4.15      5.58      3.21
   SRCPARAM L0002211           0.0      4.15      5.58      3.21
   SRCPARAM L0002212           0.0      4.15      5.58      3.21
   SRCPARAM L0002213           0.0      4.15      5.58      3.21
   SRCPARAM L0002214           0.0      4.15      5.58      3.21
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   SRCPARAM L0002216           0.0      4.15      5.58      3.21
   SRCPARAM L0002217           0.0      4.15      5.58      3.21
   SRCPARAM L0002218           0.0      4.15      5.58      3.21
   SRCPARAM L0002219           0.0      4.15      5.58      3.21
   SRCPARAM L0002220           0.0      4.15      5.58      3.21
   SRCPARAM L0002221           0.0      4.15      5.58      3.21
   SRCPARAM L0002222           0.0      4.15      5.58      3.21
   SRCPARAM L0002223           0.0      4.15      5.58      3.21
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   SRCPARAM L0002225           0.0      4.15      5.58      3.21
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   SRCPARAM L0002227           0.0      4.15      5.58      3.21
   SRCPARAM L0002228           0.0      4.15      5.58      3.21
   SRCPARAM L0002229           0.0      4.15      5.58      3.21
   SRCPARAM L0002230           0.0      4.15      5.58      3.21
   SRCPARAM L0002231           0.0      4.15      5.58      3.21
   SRCPARAM L0002232           0.0      4.15      5.58      3.21
   SRCPARAM L0002233           0.0      4.15      5.58      3.21
   SRCPARAM L0002234           0.0      4.15      5.58      3.21
   SRCPARAM L0002235           0.0      4.15      5.58      3.21
   SRCPARAM L0002236           0.0      4.15      5.58      3.21
   SRCPARAM L0002237           0.0      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0002332     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002333     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002334     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002335     0.000004262      4.15      5.58      3.21
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   SRCPARAM L0002336     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002337     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002338     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002339     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002340     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002341     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002342     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002343     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002344     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002345     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002346     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002347     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002348     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002349     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002350     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002351     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002352     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002353     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002354     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002355     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002356     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002357     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002358     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002359     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002360     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002361     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002362     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002363     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002364     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002365     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002366     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002367     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002368     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002369     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002370     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002371     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002372     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002373     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002374     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002375     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002376     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002377     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002378     0.000004262      4.15       5.58       3.21
** ------------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0002379     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002380     0.000004262      4.15       5.58       3.21
   SRCPARAM L0002381     0.000004262      4.15       5.58       3.21
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   SRCPARAM L0002382     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002383     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002384     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002385     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002386     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002387     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002388     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002389     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002390     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002391     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002392     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002393     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002394     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002395     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002396     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002397     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002398     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002399     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002400     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002401     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002402     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002403     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002404     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002405     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002406     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002407     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002408     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002409     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002410     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002411     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002412     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002413     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002414     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002415     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002416     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002417     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002418     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002419     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002420     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002421     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002422     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002423     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002424     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002425     0.000004262      4.15      5.58      3.21
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   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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RE STARTING
   INCLUDED Westport_StevensCrk_PM2.rou
RE FINISHED
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** AERMOD Meteorology Pathway
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**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
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** AERMOD Output Pathway
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   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_STEVENSCRK_PM2.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_STEVENSCRK_PM2.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_STEVENSCRK_PM2.AD\AN00GALL.PLT 33
   SUMMFILE Westport_StevensCrk_PM2.sum
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
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** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/22/2018
** File:
C:\Users\ace.malisos\Desktop\Westport\Westport_StevensCrk_PM2\Westport_StevensCrk_P
M2.ADI
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** AERMOD Control Pathway
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CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID PM_2.5
   RUNORNOT RUN
   ERRORFIL Westport_StevensCrk_PM2.err
CO FINISHED
**
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** AERMOD Source Pathway
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**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
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** 584318.073, 4130698.556, 91.70, 4.15, 5.58
** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0002057     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0002058     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0002059     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0002060     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0002061     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0002062     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0002063     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0002064     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0002065     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0002066     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0002067     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0002068     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0002069     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0002070     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0002071     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0002072     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0002073     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0002074     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0002075     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0002076     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0002077     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0002078     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0002079     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0002080     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0002081     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0002082     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0002083     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0002084     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0002085     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0002086     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0002087     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0002088     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0002089     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0002090     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0002091     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0002092     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0002093     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0002094     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0002095     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0002096     VOLUME   584171.753 4131148.048 86.71
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LOCATION L0002097     VOLUME   584169.465 4131159.828 86.73
LOCATION L0002098     VOLUME   584167.177 4131171.608 86.78
LOCATION L0002099     VOLUME   584164.889 4131183.388 86.89
LOCATION L0002100     VOLUME   584162.601 4131195.168 87.07
LOCATION L0002101     VOLUME   584160.314 4131206.948 87.20
LOCATION L0002102     VOLUME   584158.026 4131218.728 87.26
LOCATION L0002103     VOLUME   584155.738 4131230.508 87.26
LOCATION L0002104     VOLUME   584153.450 4131242.288 87.31
LOCATION L0002105     VOLUME   584151.162 4131254.067 87.39
LOCATION L0002106     VOLUME   584148.874 4131265.847 87.49
LOCATION L0002107     VOLUME   584146.587 4131277.627 87.61
LOCATION L0002108     VOLUME   584144.299 4131289.407 87.75
LOCATION L0002109     VOLUME   584142.011 4131301.187 87.91
LOCATION L0002110     VOLUME   584139.723 4131312.967 88.13
LOCATION L0002111     VOLUME   584137.435 4131324.747 88.36
LOCATION L0002112     VOLUME   584135.147 4131336.527 88.59
LOCATION L0002113     VOLUME   584132.860 4131348.307 88.71
LOCATION L0002114     VOLUME   584130.572 4131360.086 88.78
LOCATION L0002115     VOLUME   584128.284 4131371.866 88.89
LOCATION L0002116     VOLUME   584125.996 4131383.646 89.05
LOCATION L0002117     VOLUME   584123.708 4131395.426 89.20
LOCATION L0002118     VOLUME   584121.420 4131407.206 89.43
LOCATION L0002119     VOLUME   584119.133 4131418.986 89.62
LOCATION L0002120     VOLUME   584116.845 4131430.766 89.79
LOCATION L0002121     VOLUME   584114.557 4131442.546 89.95
LOCATION L0002122     VOLUME   584112.269 4131454.326 90.11
LOCATION L0002123     VOLUME   584109.293 4131465.928 90.22
LOCATION L0002124     VOLUME   584105.608 4131477.349 90.30
LOCATION L0002125     VOLUME   584101.924 4131488.769 90.39
LOCATION L0002126     VOLUME   584098.240 4131500.190 90.51
LOCATION L0002127     VOLUME   584094.556 4131511.610 90.63
LOCATION L0002128     VOLUME   584090.872 4131523.031 90.74
LOCATION L0002129     VOLUME   584087.188 4131534.451 90.87
LOCATION L0002130     VOLUME   584083.504 4131545.872 91.02
LOCATION L0002131     VOLUME   584079.361 4131557.129 91.15
LOCATION L0002132     VOLUME   584075.011 4131568.313 91.26
LOCATION L0002133     VOLUME   584070.662 4131579.497 91.38
LOCATION L0002134     VOLUME   584066.313 4131590.681 91.51
LOCATION L0002135     VOLUME   584061.963 4131601.865 91.67
LOCATION L0002136     VOLUME   584057.614 4131613.049 91.85
LOCATION L0002137     VOLUME   584053.265 4131624.233 91.95
LOCATION L0002138     VOLUME   584048.915 4131635.417 92.02
LOCATION L0002139     VOLUME   584044.566 4131646.601 92.13
LOCATION L0002140     VOLUME   584040.216 4131657.785 92.25
LOCATION L0002141     VOLUME   584035.867 4131668.969 92.38
LOCATION L0002142     VOLUME   584031.229 4131680.004 92.43
LOCATION L0002143     VOLUME   584024.573 4131689.988 92.52
LOCATION L0002144     VOLUME   584017.917 4131699.973 92.55
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   LOCATION L0002145     VOLUME   584011.260 4131709.957 92.56
   LOCATION L0002146     VOLUME   584004.604 4131719.942 92.58
   LOCATION L0002147     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
** 583972.941, 4131730.297, 92.00, 4.15, 5.58
** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0002149     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0002150     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0002151     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0002152     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0002153     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0002154     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0002155     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0002156     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0002157     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0002158     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0002159     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0002160     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0002161     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0002162     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0002163     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0002164     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0002165     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0002166     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0002167     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0002168     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0002169     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0002170     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0002171     VOLUME   584083.695 4131473.879 89.42
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LOCATION L0002172     VOLUME   584086.826 4131462.295 89.31
LOCATION L0002173     VOLUME   584089.956 4131450.711 89.21
LOCATION L0002174     VOLUME   584093.087 4131439.126 89.11
LOCATION L0002175     VOLUME   584096.218 4131427.542 89.02
LOCATION L0002176     VOLUME   584099.349 4131415.958 89.17
LOCATION L0002177     VOLUME   584102.480 4131404.373 89.16
LOCATION L0002178     VOLUME   584105.611 4131392.789 88.97
LOCATION L0002179     VOLUME   584108.742 4131381.204 88.86
LOCATION L0002180     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002181     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002182     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002183     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002184     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002185     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002186     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002187     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002188     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002189     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002190     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002191     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002192     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002193     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002194     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002195     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002196     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002197     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002198     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002199     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002200     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002201     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002202     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002203     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002204     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002205     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002206     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002207     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002208     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002209     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002210     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002211     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002212     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002213     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002214     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002215     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002216     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002217     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002218     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002219     VOLUME   584213.760 4130913.195 89.97
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   LOCATION L0002220     VOLUME   584217.097 4130901.668 90.14
   LOCATION L0002221     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002222     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002223     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002224     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002225     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002226     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002227     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002228     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002229     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002230     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002231     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002232     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002233     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002234     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002235     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002236     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002237     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0002003
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 4.15, 5.58
** 584356.298, 4131105.625, 91.89, 4.15, 5.58
** 584754.237, 4131112.421, 86.16, 4.15, 5.58
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   LOCATION L0002333     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0002334     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0002335     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0002336     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0002337     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0002338     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0002339     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0002340     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0002341     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0002342     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0002343     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0002344     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0002345     VOLUME   584355.888 4131105.614 91.93
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   LOCATION L0002346     VOLUME   584367.886 4131105.823 91.93
   LOCATION L0002347     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0002348     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0002349     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0002350     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0002351     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0002352     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0002353     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0002354     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0002355     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0002356     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0002357     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0002358     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0002359     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0002360     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0002361     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0002362     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0002363     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0002364     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0002365     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0002366     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0002367     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0002368     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0002369     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0002370     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0002371     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0002372     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0002373     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0002374     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0002375     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0002376     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0002377     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0002378     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0002003
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 4.15, 5.58
** 584374.420, 4131122.992, 91.63, 4.15, 5.58
** 584190.176, 4131122.237, 90.97, 4.15, 5.58
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   LOCATION L0002379     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0002380     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0002381     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0002382     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0002383     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0002384     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0002385     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0002386     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0002387     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0002388     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0002389     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0002390     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0002391     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0002392     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0002393     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0002394     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0002395     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0002396     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0002397     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0002398     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0002399     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0002400     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0002401     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0002402     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0002403     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0002404     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0002405     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0002406     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0002407     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0002408     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0002409     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0002410     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0002411     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0002412     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0002413     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0002414     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0002415     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0002416     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0002417     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0002418     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0002419     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0002420     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0002421     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0002422     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0002423     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0002424     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0002425     VOLUME   584197.775 4131122.268 89.75
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** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0002057          0.0      4.15      5.58      2.93
   SRCPARAM L0002058          0.0      4.15      5.58      2.93
   SRCPARAM L0002059          0.0      4.15      5.58      2.93
   SRCPARAM L0002060          0.0      4.15      5.58      2.93
   SRCPARAM L0002061          0.0      4.15      5.58      2.93
   SRCPARAM L0002062          0.0      4.15      5.58      2.93
   SRCPARAM L0002063          0.0      4.15      5.58      2.93
   SRCPARAM L0002064          0.0      4.15      5.58      2.93
   SRCPARAM L0002065          0.0      4.15      5.58      2.93
   SRCPARAM L0002066          0.0      4.15      5.58      2.93
   SRCPARAM L0002067          0.0      4.15      5.58      2.93
   SRCPARAM L0002068          0.0      4.15      5.58      2.93
   SRCPARAM L0002069          0.0      4.15      5.58      2.93
   SRCPARAM L0002070          0.0      4.15      5.58      2.93
   SRCPARAM L0002071          0.0      4.15      5.58      2.93
   SRCPARAM L0002072          0.0      4.15      5.58      2.93
   SRCPARAM L0002073          0.0      4.15      5.58      2.93
   SRCPARAM L0002074          0.0      4.15      5.58      2.93
   SRCPARAM L0002075          0.0      4.15      5.58      2.93
   SRCPARAM L0002076          0.0      4.15      5.58      2.93
   SRCPARAM L0002077          0.0      4.15      5.58      2.93
   SRCPARAM L0002078          0.0      4.15      5.58      2.93
   SRCPARAM L0002079          0.0      4.15      5.58      2.93
   SRCPARAM L0002080          0.0      4.15      5.58      2.93
   SRCPARAM L0002081          0.0      4.15      5.58      2.93
   SRCPARAM L0002082          0.0      4.15      5.58      2.93
   SRCPARAM L0002083          0.0      4.15      5.58      2.93
   SRCPARAM L0002084          0.0      4.15      5.58      2.93
   SRCPARAM L0002085          0.0      4.15      5.58      2.93
   SRCPARAM L0002086          0.0      4.15      5.58      2.93
   SRCPARAM L0002087          0.0      4.15      5.58      2.93
   SRCPARAM L0002088          0.0      4.15      5.58      2.93
   SRCPARAM L0002089          0.0      4.15      5.58      2.93
   SRCPARAM L0002090          0.0      4.15      5.58      2.93
   SRCPARAM L0002091          0.0      4.15      5.58      2.93
   SRCPARAM L0002092          0.0      4.15      5.58      2.93
   SRCPARAM L0002093          0.0      4.15      5.58      2.93
   SRCPARAM L0002094          0.0      4.15      5.58      2.93
   SRCPARAM L0002095          0.0      4.15      5.58      2.93
   SRCPARAM L0002096          0.0      4.15      5.58      2.93
   SRCPARAM L0002097          0.0      4.15      5.58      2.93
   SRCPARAM L0002098          0.0      4.15      5.58      2.93
   SRCPARAM L0002099          0.0      4.15      5.58      2.93
   SRCPARAM L0002100          0.0      4.15      5.58      2.93
   SRCPARAM L0002101          0.0      4.15      5.58      2.93
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   SRCPARAM L0002102           0.0      4.15      5.58      2.93
   SRCPARAM L0002103           0.0      4.15      5.58      2.93
   SRCPARAM L0002104           0.0      4.15      5.58      2.93
   SRCPARAM L0002105           0.0      4.15      5.58      2.93
   SRCPARAM L0002106           0.0      4.15      5.58      2.93
   SRCPARAM L0002107           0.0      4.15      5.58      2.93
   SRCPARAM L0002108           0.0      4.15      5.58      2.93
   SRCPARAM L0002109           0.0      4.15      5.58      2.93
   SRCPARAM L0002110           0.0      4.15      5.58      2.93
   SRCPARAM L0002111           0.0      4.15      5.58      2.93
   SRCPARAM L0002112           0.0      4.15      5.58      2.93
   SRCPARAM L0002113           0.0      4.15      5.58      2.93
   SRCPARAM L0002114           0.0      4.15      5.58      2.93
   SRCPARAM L0002115           0.0      4.15      5.58      2.93
   SRCPARAM L0002116           0.0      4.15      5.58      2.93
   SRCPARAM L0002117           0.0      4.15      5.58      2.93
   SRCPARAM L0002118           0.0      4.15      5.58      2.93
   SRCPARAM L0002119           0.0      4.15      5.58      2.93
   SRCPARAM L0002120           0.0      4.15      5.58      2.93
   SRCPARAM L0002121           0.0      4.15      5.58      2.93
   SRCPARAM L0002122           0.0      4.15      5.58      2.93
   SRCPARAM L0002123           0.0      4.15      5.58      2.93
   SRCPARAM L0002124           0.0      4.15      5.58      2.93
   SRCPARAM L0002125           0.0      4.15      5.58      2.93
   SRCPARAM L0002126           0.0      4.15      5.58      2.93
   SRCPARAM L0002127           0.0      4.15      5.58      2.93
   SRCPARAM L0002128           0.0      4.15      5.58      2.93
   SRCPARAM L0002129           0.0      4.15      5.58      2.93
   SRCPARAM L0002130           0.0      4.15      5.58      2.93
   SRCPARAM L0002131           0.0      4.15      5.58      2.93
   SRCPARAM L0002132           0.0      4.15      5.58      2.93
   SRCPARAM L0002133           0.0      4.15      5.58      2.93
   SRCPARAM L0002134           0.0      4.15      5.58      2.93
   SRCPARAM L0002135           0.0      4.15      5.58      2.93
   SRCPARAM L0002136           0.0      4.15      5.58      2.93
   SRCPARAM L0002137           0.0      4.15      5.58      2.93
   SRCPARAM L0002138           0.0      4.15      5.58      2.93
   SRCPARAM L0002139           0.0      4.15      5.58      2.93
   SRCPARAM L0002140           0.0      4.15      5.58      2.93
   SRCPARAM L0002141           0.0      4.15      5.58      2.93
   SRCPARAM L0002142           0.0      4.15      5.58      2.93
   SRCPARAM L0002143           0.0      4.15      5.58      2.93
   SRCPARAM L0002144           0.0      4.15      5.58      2.93
   SRCPARAM L0002145           0.0      4.15      5.58      2.93
   SRCPARAM L0002146           0.0      4.15      5.58      2.93
   SRCPARAM L0002147           0.0      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
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   SRCPARAM L0002148          0.0      4.15      5.58      3.21
   SRCPARAM L0002149          0.0      4.15      5.58      3.21
   SRCPARAM L0002150          0.0      4.15      5.58      3.21
   SRCPARAM L0002151          0.0      4.15      5.58      3.21
   SRCPARAM L0002152          0.0      4.15      5.58      3.21
   SRCPARAM L0002153          0.0      4.15      5.58      3.21
   SRCPARAM L0002154          0.0      4.15      5.58      3.21
   SRCPARAM L0002155          0.0      4.15      5.58      3.21
   SRCPARAM L0002156          0.0      4.15      5.58      3.21
   SRCPARAM L0002157          0.0      4.15      5.58      3.21
   SRCPARAM L0002158          0.0      4.15      5.58      3.21
   SRCPARAM L0002159          0.0      4.15      5.58      3.21
   SRCPARAM L0002160          0.0      4.15      5.58      3.21
   SRCPARAM L0002161          0.0      4.15      5.58      3.21
   SRCPARAM L0002162          0.0      4.15      5.58      3.21
   SRCPARAM L0002163          0.0      4.15      5.58      3.21
   SRCPARAM L0002164          0.0      4.15      5.58      3.21
   SRCPARAM L0002165          0.0      4.15      5.58      3.21
   SRCPARAM L0002166          0.0      4.15      5.58      3.21
   SRCPARAM L0002167          0.0      4.15      5.58      3.21
   SRCPARAM L0002168          0.0      4.15      5.58      3.21
   SRCPARAM L0002169          0.0      4.15      5.58      3.21
   SRCPARAM L0002170          0.0      4.15      5.58      3.21
   SRCPARAM L0002171          0.0      4.15      5.58      3.21
   SRCPARAM L0002172          0.0      4.15      5.58      3.21
   SRCPARAM L0002173          0.0      4.15      5.58      3.21
   SRCPARAM L0002174          0.0      4.15      5.58      3.21
   SRCPARAM L0002175          0.0      4.15      5.58      3.21
   SRCPARAM L0002176          0.0      4.15      5.58      3.21
   SRCPARAM L0002177          0.0      4.15      5.58      3.21
   SRCPARAM L0002178          0.0      4.15      5.58      3.21
   SRCPARAM L0002179          0.0      4.15      5.58      3.21
   SRCPARAM L0002180          0.0      4.15      5.58      3.21
   SRCPARAM L0002181          0.0      4.15      5.58      3.21
   SRCPARAM L0002182          0.0      4.15      5.58      3.21
   SRCPARAM L0002183          0.0      4.15      5.58      3.21
   SRCPARAM L0002184          0.0      4.15      5.58      3.21
   SRCPARAM L0002185          0.0      4.15      5.58      3.21
   SRCPARAM L0002186          0.0      4.15      5.58      3.21
   SRCPARAM L0002187          0.0      4.15      5.58      3.21
   SRCPARAM L0002188          0.0      4.15      5.58      3.21
   SRCPARAM L0002189          0.0      4.15      5.58      3.21
   SRCPARAM L0002190          0.0      4.15      5.58      3.21
   SRCPARAM L0002191          0.0      4.15      5.58      3.21
   SRCPARAM L0002192          0.0      4.15      5.58      3.21
   SRCPARAM L0002193          0.0      4.15      5.58      3.21
   SRCPARAM L0002194          0.0      4.15      5.58      3.21
   SRCPARAM L0002195          0.0      4.15      5.58      3.21
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   SRCPARAM L0002196           0.0      4.15      5.58      3.21
   SRCPARAM L0002197           0.0      4.15      5.58      3.21
   SRCPARAM L0002198           0.0      4.15      5.58      3.21
   SRCPARAM L0002199           0.0      4.15      5.58      3.21
   SRCPARAM L0002200           0.0      4.15      5.58      3.21
   SRCPARAM L0002201           0.0      4.15      5.58      3.21
   SRCPARAM L0002202           0.0      4.15      5.58      3.21
   SRCPARAM L0002203           0.0      4.15      5.58      3.21
   SRCPARAM L0002204           0.0      4.15      5.58      3.21
   SRCPARAM L0002205           0.0      4.15      5.58      3.21
   SRCPARAM L0002206           0.0      4.15      5.58      3.21
   SRCPARAM L0002207           0.0      4.15      5.58      3.21
   SRCPARAM L0002208           0.0      4.15      5.58      3.21
   SRCPARAM L0002209           0.0      4.15      5.58      3.21
   SRCPARAM L0002210           0.0      4.15      5.58      3.21
   SRCPARAM L0002211           0.0      4.15      5.58      3.21
   SRCPARAM L0002212           0.0      4.15      5.58      3.21
   SRCPARAM L0002213           0.0      4.15      5.58      3.21
   SRCPARAM L0002214           0.0      4.15      5.58      3.21
   SRCPARAM L0002215           0.0      4.15      5.58      3.21
   SRCPARAM L0002216           0.0      4.15      5.58      3.21
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   SRCPARAM L0002218           0.0      4.15      5.58      3.21
   SRCPARAM L0002219           0.0      4.15      5.58      3.21
   SRCPARAM L0002220           0.0      4.15      5.58      3.21
   SRCPARAM L0002221           0.0      4.15      5.58      3.21
   SRCPARAM L0002222           0.0      4.15      5.58      3.21
   SRCPARAM L0002223           0.0      4.15      5.58      3.21
   SRCPARAM L0002224           0.0      4.15      5.58      3.21
   SRCPARAM L0002225           0.0      4.15      5.58      3.21
   SRCPARAM L0002226           0.0      4.15      5.58      3.21
   SRCPARAM L0002227           0.0      4.15      5.58      3.21
   SRCPARAM L0002228           0.0      4.15      5.58      3.21
   SRCPARAM L0002229           0.0      4.15      5.58      3.21
   SRCPARAM L0002230           0.0      4.15      5.58      3.21
   SRCPARAM L0002231           0.0      4.15      5.58      3.21
   SRCPARAM L0002232           0.0      4.15      5.58      3.21
   SRCPARAM L0002233           0.0      4.15      5.58      3.21
   SRCPARAM L0002234           0.0      4.15      5.58      3.21
   SRCPARAM L0002235           0.0      4.15      5.58      3.21
   SRCPARAM L0002236           0.0      4.15      5.58      3.21
   SRCPARAM L0002237           0.0      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
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   SRCPARAM L0002333     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002334     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002335     0.000004262      4.15      5.58      3.21
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   SRCPARAM L0002336     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002337     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002338     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002339     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002340     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002341     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002342     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002343     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002344     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002345     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002346     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002347     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002348     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002349     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002350     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002351     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002352     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002353     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002354     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002355     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002356     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002357     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002358     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002359     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002360     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002361     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002362     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002363     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002364     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002365     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002366     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002367     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002368     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002369     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002370     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002371     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002372     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002373     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002374     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002375     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002376     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002377     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002378     0.000004262      4.15      5.58      3.21
** ------------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0002379     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002380     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002381     0.000004262      4.15      5.58      3.21
```

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   SRCPARAM L0002382     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002383     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002384     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002385     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002386     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002387     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002388     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002389     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002390     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002391     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002392     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002393     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002394     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002395     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002396     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002397     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002398     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002399     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002400     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002401     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002402     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002403     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002404     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002405     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002406     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002407     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002408     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002409     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002410     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002411     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002412     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002413     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002414     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002415     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002416     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002417     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002418     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002419     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002420     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002421     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002422     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002423     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002424     0.000004262      4.15      5.58      3.21
   SRCPARAM L0002425     0.000004262      4.15      5.58      3.21
** ------------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED Westport_StevensCrk_PM2.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_STEVENSCRK_PM2.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_STEVENSCRK_PM2.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_STEVENSCRK_PM2.AD\AN00GALL.PLT 33
   SUMMFILE Westport_StevensCrk_PM2.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of          181 Warning Message(s)
 A Total of            0 Informational Message(s)
```

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   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     386        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     387        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     388        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     389        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     390        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     391        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     392        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     393        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     394        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     395        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     396        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     397        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     398        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     399        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     400        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     401        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     402        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     403        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     404        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     405        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     406        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     407         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     408         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     409         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     410         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     411         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     412         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     413         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     414         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     415         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     416         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     417         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     418         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     419         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     420         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     421         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     422         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     423         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     424         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     425         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     427         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     429         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     430         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     431         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     432         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     455         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     456         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     476         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     479         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     480         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     481         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     482         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      505         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      506         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     529         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     530         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     531         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     532         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     541         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     542         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     553         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     554         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     563         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     564         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     565         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     566         VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     567         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     568         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            ***     MODEL SETUP OPTIONS SUMMARY
  ***
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- - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   275 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   1918000.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_2.5

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:    275 Source(s);       1 Source Group(s); and     100
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    275 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.
```

```
 **The AERMET Input Meteorological Data Version Date:  14134

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    11.90 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                               ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Westport_StevensCrk_PM2.err

 **File for Summary of Results:   Westport_StevensCrk_PM2.sum

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                          *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
```

```
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0002057         0   0.00000E+00  584315.9 4130704.1    92.2     4.15     5.58
2.93     YES
 L0002058         0   0.00000E+00  584311.5 4130715.3    92.0     4.15     5.58
2.93     YES
 L0002059         0   0.00000E+00  584307.1 4130726.5    91.5     4.15     5.58
2.93     YES
 L0002060         0   0.00000E+00  584302.7 4130737.6    91.4     4.15     5.58
2.93     YES
 L0002061         0   0.00000E+00  584298.3 4130748.8    91.4     4.15     5.58
2.93     YES
 L0002062         0   0.00000E+00  584293.9 4130760.0    91.9     4.15     5.58
2.93     YES
 L0002063         0   0.00000E+00  584289.5 4130771.1    91.9     4.15     5.58
2.93     YES
 L0002064         0   0.00000E+00  584285.1 4130782.3    91.4     4.15     5.58
2.93     YES
 L0002065         0   0.00000E+00  584280.7 4130793.5    91.0     4.15     5.58
2.93     YES
 L0002066         0   0.00000E+00  584276.3 4130804.6    90.9     4.15     5.58
2.93     YES
 L0002067         0   0.00000E+00  584271.9 4130815.8    90.8     4.15     5.58
2.93     YES
 L0002068         0   0.00000E+00  584267.5 4130827.0    90.7     4.15     5.58
2.93     YES
 L0002069         0   0.00000E+00  584263.2 4130838.1    90.6     4.15     5.58
2.93     YES
 L0002070         0   0.00000E+00  584258.8 4130849.3    90.5     4.15     5.58
2.93     YES
 L0002071         0   0.00000E+00  584254.4 4130860.5    90.3     4.15     5.58
2.93     YES
 L0002072         0   0.00000E+00  584250.0 4130871.6    90.2     4.15     5.58
2.93     YES
 L0002073         0   0.00000E+00  584245.6 4130882.8    90.2     4.15     5.58
2.93     YES
 L0002074         0   0.00000E+00  584241.2 4130894.0    90.1     4.15     5.58
2.93     YES
 L0002075         0   0.00000E+00  584236.8 4130905.1    89.9     4.15     5.58
2.93     YES
 L0002076         0   0.00000E+00  584232.4 4130916.3    89.6     4.15     5.58
2.93     YES
 L0002077         0   0.00000E+00  584228.0 4130927.5    89.5     4.15     5.58
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2.93     YES
 L0002078         0   0.00000E+00  584223.6 4130938.6    89.4     4.15     5.58
2.93     YES
 L0002079         0   0.00000E+00  584219.2 4130949.8    89.3     4.15     5.58
2.93     YES
 L0002080         0   0.00000E+00  584214.8 4130961.0    89.2     4.15     5.58
2.93     YES
 L0002081         0   0.00000E+00  584212.0 4130972.6    89.0     4.15     5.58
2.93     YES
 L0002082         0   0.00000E+00  584209.2 4130984.3    88.8     4.15     5.58
2.93     YES
 L0002083         0   0.00000E+00  584206.4 4130996.0    88.4     4.15     5.58
2.93     YES
 L0002084         0   0.00000E+00  584203.6 4131007.6    88.2     4.15     5.58
2.93     YES
 L0002085         0   0.00000E+00  584200.8 4131019.3    88.0     4.15     5.58
2.93     YES
 L0002086         0   0.00000E+00  584198.1 4131031.0    87.8     4.15     5.58
2.93     YES
 L0002087         0   0.00000E+00  584195.3 4131042.7    87.6     4.15     5.58
2.93     YES
 L0002088         0   0.00000E+00  584192.5 4131054.3    87.5     4.15     5.58
2.93     YES
 L0002089         0   0.00000E+00  584189.7 4131066.0    87.5     4.15     5.58
2.93     YES
 L0002090         0   0.00000E+00  584186.9 4131077.7    87.5     4.15     5.58
2.93     YES
 L0002091         0   0.00000E+00  584184.2 4131089.4    87.3     4.15     5.58
2.93     YES
 L0002092         0   0.00000E+00  584181.4 4131101.0    87.0     4.15     5.58
2.93     YES
 L0002093         0   0.00000E+00  584178.6 4131112.7    86.9     4.15     5.58
2.93     YES
 L0002094         0   0.00000E+00  584176.3 4131124.5    86.8     4.15     5.58
2.93     YES
 L0002095         0   0.00000E+00  584174.0 4131136.3    86.8     4.15     5.58
2.93     YES
 L0002096         0   0.00000E+00  584171.8 4131148.0    86.7     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

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                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0002097         0   0.00000E+00  584169.5 4131159.8    86.7     4.15     5.58
2.93     YES
 L0002098         0   0.00000E+00  584167.2 4131171.6    86.8     4.15     5.58
2.93     YES
 L0002099         0   0.00000E+00  584164.9 4131183.4    86.9     4.15     5.58
2.93     YES
 L0002100         0   0.00000E+00  584162.6 4131195.2    87.1     4.15     5.58
2.93     YES
 L0002101         0   0.00000E+00  584160.3 4131206.9    87.2     4.15     5.58
2.93     YES
 L0002102         0   0.00000E+00  584158.0 4131218.7    87.3     4.15     5.58
2.93     YES
 L0002103         0   0.00000E+00  584155.7 4131230.5    87.3     4.15     5.58
2.93     YES
 L0002104         0   0.00000E+00  584153.5 4131242.3    87.3     4.15     5.58
2.93     YES
 L0002105         0   0.00000E+00  584151.2 4131254.1    87.4     4.15     5.58
2.93     YES
 L0002106         0   0.00000E+00  584148.9 4131265.8    87.5     4.15     5.58
2.93     YES
 L0002107         0   0.00000E+00  584146.6 4131277.6    87.6     4.15     5.58
2.93     YES
 L0002108         0   0.00000E+00  584144.3 4131289.4    87.8     4.15     5.58
2.93     YES
 L0002109         0   0.00000E+00  584142.0 4131301.2    87.9     4.15     5.58
2.93     YES
 L0002110         0   0.00000E+00  584139.7 4131313.0    88.1     4.15     5.58
2.93     YES
 L0002111         0   0.00000E+00  584137.4 4131324.7    88.4     4.15     5.58
2.93     YES
 L0002112         0   0.00000E+00  584135.1 4131336.5    88.6     4.15     5.58
2.93     YES
 L0002113         0   0.00000E+00  584132.9 4131348.3    88.7     4.15     5.58
2.93     YES
 L0002114         0   0.00000E+00  584130.6 4131360.1    88.8     4.15     5.58
2.93     YES
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 L0002115         0   0.00000E+00  584128.3 4131371.9    88.9     4.15     5.58
2.93     YES
 L0002116         0   0.00000E+00  584126.0 4131383.6    89.0     4.15     5.58
2.93     YES
 L0002117         0   0.00000E+00  584123.7 4131395.4    89.2     4.15     5.58
2.93     YES
 L0002118         0   0.00000E+00  584121.4 4131407.2    89.4     4.15     5.58
2.93     YES
 L0002119         0   0.00000E+00  584119.1 4131419.0    89.6     4.15     5.58
2.93     YES
 L0002120         0   0.00000E+00  584116.8 4131430.8    89.8     4.15     5.58
2.93     YES
 L0002121         0   0.00000E+00  584114.6 4131442.5    90.0     4.15     5.58
2.93     YES
 L0002122         0   0.00000E+00  584112.3 4131454.3    90.1     4.15     5.58
2.93     YES
 L0002123         0   0.00000E+00  584109.3 4131465.9    90.2     4.15     5.58
2.93     YES
 L0002124         0   0.00000E+00  584105.6 4131477.3    90.3     4.15     5.58
2.93     YES
 L0002125         0   0.00000E+00  584101.9 4131488.8    90.4     4.15     5.58
2.93     YES
 L0002126         0   0.00000E+00  584098.2 4131500.2    90.5     4.15     5.58
2.93     YES
 L0002127         0   0.00000E+00  584094.6 4131511.6    90.6     4.15     5.58
2.93     YES
 L0002128         0   0.00000E+00  584090.9 4131523.0    90.7     4.15     5.58
2.93     YES
 L0002129         0   0.00000E+00  584087.2 4131534.5    90.9     4.15     5.58
2.93     YES
 L0002130         0   0.00000E+00  584083.5 4131545.9    91.0     4.15     5.58
2.93     YES
 L0002131         0   0.00000E+00  584079.4 4131557.1    91.1     4.15     5.58
2.93     YES
 L0002132         0   0.00000E+00  584075.0 4131568.3    91.3     4.15     5.58
2.93     YES
 L0002133         0   0.00000E+00  584070.7 4131579.5    91.4     4.15     5.58
2.93     YES
 L0002134         0   0.00000E+00  584066.3 4131590.7    91.5     4.15     5.58
2.93     YES
 L0002135         0   0.00000E+00  584062.0 4131601.9    91.7     4.15     5.58
2.93     YES
 L0002136         0   0.00000E+00  584057.6 4131613.0    91.8     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0002137         0   0.00000E+00  584053.3 4131624.2    92.0     4.15     5.58
2.93     YES
 L0002138         0   0.00000E+00  584048.9 4131635.4    92.0     4.15     5.58
2.93     YES
 L0002139         0   0.00000E+00  584044.6 4131646.6    92.1     4.15     5.58
2.93     YES
 L0002140         0   0.00000E+00  584040.2 4131657.8    92.2     4.15     5.58
2.93     YES
 L0002141         0   0.00000E+00  584035.9 4131669.0    92.4     4.15     5.58
2.93     YES
 L0002142         0   0.00000E+00  584031.2 4131680.0    92.4     4.15     5.58
2.93     YES
 L0002143         0   0.00000E+00  584024.6 4131690.0    92.5     4.15     5.58
2.93     YES
 L0002144         0   0.00000E+00  584017.9 4131700.0    92.5     4.15     5.58
2.93     YES
 L0002145         0   0.00000E+00  584011.3 4131710.0    92.6     4.15     5.58
2.93     YES
 L0002146         0   0.00000E+00  584004.6 4131719.9    92.6     4.15     5.58
2.93     YES
 L0002147         0   0.00000E+00  583997.9 4131729.9    92.6     4.15     5.58
2.93     YES
 L0002148         0   0.00000E+00  583976.3 4131725.3    91.9     4.15     5.58
3.21     YES
 L0002149         0   0.00000E+00  583983.1 4131715.4    91.9     4.15     5.58
3.21     YES
 L0002150         0   0.00000E+00  583989.9 4131705.5    91.9     4.15     5.58
3.21     YES
 L0002151         0   0.00000E+00  583996.7 4131695.6    92.0     4.15     5.58
3.21     YES
 L0002152         0   0.00000E+00  584003.5 4131685.8    91.7     4.15     5.58
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3.21     YES
 L0002153         0   0.00000E+00  584010.2 4131675.9    91.7     4.15     5.58
3.21     YES
 L0002154         0   0.00000E+00  584017.0 4131666.0    91.9     4.15     5.58
3.21     YES
 L0002155         0   0.00000E+00  584023.8 4131656.1    91.9     4.15     5.58
3.21     YES
 L0002156         0   0.00000E+00  584028.5 4131645.1    91.6     4.15     5.58
3.21     YES
 L0002157         0   0.00000E+00  584032.5 4131633.8    91.4     4.15     5.58
3.21     YES
 L0002158         0   0.00000E+00  584036.5 4131622.4    91.3     4.15     5.58
3.21     YES
 L0002159         0   0.00000E+00  584040.5 4131611.1    91.2     4.15     5.58
3.21     YES
 L0002160         0   0.00000E+00  584044.5 4131599.8    91.2     4.15     5.58
3.21     YES
 L0002161         0   0.00000E+00  584048.5 4131588.5    91.1     4.15     5.58
3.21     YES
 L0002162         0   0.00000E+00  584052.5 4131577.2    90.8     4.15     5.58
3.21     YES
 L0002163         0   0.00000E+00  584056.5 4131565.9    90.6     4.15     5.58
3.21     YES
 L0002164         0   0.00000E+00  584060.5 4131554.6    90.4     4.15     5.58
3.21     YES
 L0002165         0   0.00000E+00  584064.5 4131543.2    90.3     4.15     5.58
3.21     YES
 L0002166         0   0.00000E+00  584068.0 4131531.8    90.2     4.15     5.58
3.21     YES
 L0002167         0   0.00000E+00  584071.2 4131520.2    90.0     4.15     5.58
3.21     YES
 L0002168         0   0.00000E+00  584074.3 4131508.6    90.2     4.15     5.58
3.21     YES
 L0002169         0   0.00000E+00  584077.4 4131497.0    90.0     4.15     5.58
3.21     YES
 L0002170         0   0.00000E+00  584080.6 4131485.5    89.5     4.15     5.58
3.21     YES
 L0002171         0   0.00000E+00  584083.7 4131473.9    89.4     4.15     5.58
3.21     YES
 L0002172         0   0.00000E+00  584086.8 4131462.3    89.3     4.15     5.58
3.21     YES
 L0002173         0   0.00000E+00  584090.0 4131450.7    89.2     4.15     5.58
3.21     YES
 L0002174         0   0.00000E+00  584093.1 4131439.1    89.1     4.15     5.58
3.21     YES
 L0002175         0   0.00000E+00  584096.2 4131427.5    89.0     4.15     5.58
3.21     YES
 L0002176         0   0.00000E+00  584099.3 4131416.0    89.2     4.15     5.58
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3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0002177         0   0.00000E+00  584102.5 4131404.4    89.2     4.15     5.58
3.21     YES
 L0002178         0   0.00000E+00  584105.6 4131392.8    89.0     4.15     5.58
3.21     YES
 L0002179         0   0.00000E+00  584108.7 4131381.2    88.9     4.15     5.58
3.21     YES
 L0002180         0   0.00000E+00  584111.1 4131369.4    88.7     4.15     5.58
3.21     YES
 L0002181         0   0.00000E+00  584113.3 4131357.7    88.6     4.15     5.58
3.21     YES
 L0002182         0   0.00000E+00  584115.6 4131345.9    88.6     4.15     5.58
3.21     YES
 L0002183         0   0.00000E+00  584117.9 4131334.1    88.5     4.15     5.58
3.21     YES
 L0002184         0   0.00000E+00  584120.1 4131322.3    88.5     4.15     5.58
3.21     YES
 L0002185         0   0.00000E+00  584122.4 4131310.5    88.3     4.15     5.58
3.21     YES
 L0002186         0   0.00000E+00  584124.6 4131298.7    88.2     4.15     5.58
3.21     YES
 L0002187         0   0.00000E+00  584126.9 4131286.9    88.0     4.15     5.58
3.21     YES
 L0002188         0   0.00000E+00  584129.1 4131275.2    87.8     4.15     5.58
3.21     YES
 L0002189         0   0.00000E+00  584131.4 4131263.4    87.5     4.15     5.58
3.21     YES
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 L0002190         0   0.00000E+00  584133.7 4131251.6    87.4      4.15      5.58
3.21     YES
 L0002191         0   0.00000E+00  584135.9 4131239.8    87.2      4.15      5.58
3.21     YES
 L0002192         0   0.00000E+00  584138.2 4131228.0    87.2      4.15      5.58
3.21     YES
 L0002193         0   0.00000E+00  584140.4 4131216.2    87.1      4.15      5.58
3.21     YES
 L0002194         0   0.00000E+00  584142.8 4131204.5    87.3      4.15      5.58
3.21     YES
 L0002195         0   0.00000E+00  584145.2 4131192.7    87.7      4.15      5.58
3.21     YES
 L0002196         0   0.00000E+00  584147.7 4131181.0    87.8      4.15      5.58
3.21     YES
 L0002197         0   0.00000E+00  584150.1 4131169.2    87.8      4.15      5.58
3.21     YES
 L0002198         0   0.00000E+00  584152.6 4131157.5    87.6      4.15      5.58
3.21     YES
 L0002199         0   0.00000E+00  584155.0 4131145.7    87.2      4.15      5.58
3.21     YES
 L0002200         0   0.00000E+00  584157.5 4131134.0    86.9      4.15      5.58
3.21     YES
 L0002201         0   0.00000E+00  584159.9 4131122.2    87.0      4.15      5.58
3.21     YES
 L0002202         0   0.00000E+00  584162.4 4131110.5    87.0      4.15      5.58
3.21     YES
 L0002203         0   0.00000E+00  584164.8 4131098.7    87.2      4.15      5.58
3.21     YES
 L0002204         0   0.00000E+00  584167.3 4131087.0    87.3      4.15      5.58
3.21     YES
 L0002205         0   0.00000E+00  584169.7 4131075.2    87.8      4.15      5.58
3.21     YES
 L0002206         0   0.00000E+00  584172.2 4131063.5    88.2      4.15      5.58
3.21     YES
 L0002207         0   0.00000E+00  584174.6 4131051.7    88.4      4.15      5.58
3.21     YES
 L0002208         0   0.00000E+00  584177.1 4131040.0    88.5      4.15      5.58
3.21     YES
 L0002209         0   0.00000E+00  584180.4 4131028.5    88.4      4.15      5.58
3.21     YES
 L0002210         0   0.00000E+00  584183.7 4131016.9    88.3      4.15      5.58
3.21     YES
 L0002211         0   0.00000E+00  584187.1 4131005.4    88.5      4.15      5.58
3.21     YES
 L0002212         0   0.00000E+00  584190.4 4130993.9    88.7      4.15      5.58
3.21     YES
 L0002213         0   0.00000E+00  584193.7 4130982.4    88.9      4.15      5.58
3.21     YES
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 L0002214         0   0.00000E+00  584197.1 4130970.8    89.2     4.15     5.58
3.21     YES
 L0002215         0   0.00000E+00  584200.4 4130959.3    89.4     4.15     5.58
3.21     YES
 L0002216         0   0.00000E+00  584203.8 4130947.8    89.6     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -


 L0002217         0   0.00000E+00  584207.1 4130936.2    89.7     4.15     5.58
3.21     YES
 L0002218         0   0.00000E+00  584210.4 4130924.7    89.8     4.15     5.58
3.21     YES
 L0002219         0   0.00000E+00  584213.8 4130913.2    90.0     4.15     5.58
3.21     YES
 L0002220         0   0.00000E+00  584217.1 4130901.7    90.1     4.15     5.58
3.21     YES
 L0002221         0   0.00000E+00  584220.4 4130890.1    90.3     4.15     5.58
3.21     YES
 L0002222         0   0.00000E+00  584223.8 4130878.6    90.5     4.15     5.58
3.21     YES
 L0002223         0   0.00000E+00  584228.2 4130867.4    90.7     4.15     5.58
3.21     YES
 L0002224         0   0.00000E+00  584232.6 4130856.3    90.8     4.15     5.58
3.21     YES
 L0002225         0   0.00000E+00  584237.0 4130845.1    90.8     4.15     5.58
3.21     YES
 L0002226         0   0.00000E+00  584241.4 4130834.0    90.8     4.15     5.58
3.21     YES
 L0002227         0   0.00000E+00  584245.8 4130822.8    90.8     4.15     5.58
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3.21     YES
 L0002228         0   0.00000E+00  584250.2 4130811.6    90.9     4.15     5.58
3.21     YES
 L0002229         0   0.00000E+00  584254.6 4130800.5    91.4     4.15     5.58
3.21     YES
 L0002230         0   0.00000E+00  584259.0 4130789.3    91.1     4.15     5.58
3.21     YES
 L0002231         0   0.00000E+00  584263.4 4130778.2    91.2     4.15     5.58
3.21     YES
 L0002232         0   0.00000E+00  584267.9 4130767.0    91.2     4.15     5.58
3.21     YES
 L0002233         0   0.00000E+00  584272.3 4130755.8    91.3     4.15     5.58
3.21     YES
 L0002234         0   0.00000E+00  584276.7 4130744.7    91.7     4.15     5.58
3.21     YES
 L0002235         0   0.00000E+00  584281.1 4130733.5    91.8     4.15     5.58
3.21     YES
 L0002236         0   0.00000E+00  584285.5 4130722.4    91.5     4.15     5.58
3.21     YES
 L0002237         0   0.00000E+00  584289.9 4130711.2    91.5     4.15     5.58
3.21     YES
 L0002332         0   0.42620E-05  584199.9 4131101.3    89.1     4.15     5.58
3.21     YES
 L0002333         0   0.42620E-05  584211.9 4131101.6    90.6     4.15     5.58
3.21     YES
 L0002334         0   0.42620E-05  584223.9 4131101.9    92.2     4.15     5.58
3.21     YES
 L0002335         0   0.42620E-05  584235.9 4131102.3    93.2     4.15     5.58
3.21     YES
 L0002336         0   0.42620E-05  584247.9 4131102.6    93.0     4.15     5.58
3.21     YES
 L0002337         0   0.42620E-05  584259.9 4131102.9    93.0     4.15     5.58
3.21     YES
 L0002338         0   0.42620E-05  584271.9 4131103.3    93.2     4.15     5.58
3.21     YES
 L0002339         0   0.42620E-05  584283.9 4131103.6    93.2     4.15     5.58
3.21     YES
 L0002340         0   0.42620E-05  584295.9 4131103.9    93.0     4.15     5.58
3.21     YES
 L0002341         0   0.42620E-05  584307.9 4131104.3    92.6     4.15     5.58
3.21     YES
 L0002342         0   0.42620E-05  584319.9 4131104.6    92.3     4.15     5.58
3.21     YES
 L0002343         0   0.42620E-05  584331.9 4131104.9    92.0     4.15     5.58
3.21     YES
 L0002344         0   0.42620E-05  584343.9 4131105.3    92.0     4.15     5.58
3.21     YES
 L0002345         0   0.42620E-05  584355.9 4131105.6    91.9     4.15     5.58
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3.21     YES
 L0002346         0   0.42620E-05  584367.9 4131105.8    91.9     4.15     5.58
3.21     YES
 L0002347         0   0.42620E-05  584379.9 4131106.0    91.9     4.15     5.58
3.21     YES
 L0002348         0   0.42620E-05  584391.9 4131106.2    91.6     4.15     5.58
3.21     YES
 L0002349         0   0.42620E-05  584403.9 4131106.4    91.4     4.15     5.58
3.21     YES
 L0002350         0   0.42620E-05  584415.9 4131106.6    91.3     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                     *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0002351         0   0.42620E-05  584427.9 4131106.8    91.2     4.15     5.58
3.21     YES
 L0002352         0   0.42620E-05  584439.9 4131107.1    91.0     4.15     5.58
3.21     YES
 L0002353         0   0.42620E-05  584451.9 4131107.3    90.9     4.15     5.58
3.21     YES
 L0002354         0   0.42620E-05  584463.9 4131107.5    90.8     4.15     5.58
3.21     YES
 L0002355         0   0.42620E-05  584475.9 4131107.7    90.6     4.15     5.58
3.21     YES
 L0002356         0   0.42620E-05  584487.9 4131107.9    90.2     4.15     5.58
3.21     YES
 L0002357         0   0.42620E-05  584499.9 4131108.1    89.8     4.15     5.58
3.21     YES
 L0002358         0   0.42620E-05  584511.9 4131108.3    89.6     4.15     5.58
3.21     YES
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 L0002359         0   0.42620E-05  584523.9 4131108.5    89.4     4.15     5.58
3.21     YES
 L0002360         0   0.42620E-05  584535.9 4131108.7    89.4     4.15     5.58
3.21     YES
 L0002361         0   0.42620E-05  584547.9 4131108.9    89.5     4.15     5.58
3.21     YES
 L0002362         0   0.42620E-05  584559.9 4131109.1    89.4     4.15     5.58
3.21     YES
 L0002363         0   0.42620E-05  584571.9 4131109.3    89.2     4.15     5.58
3.21     YES
 L0002364         0   0.42620E-05  584583.9 4131109.5    89.0     4.15     5.58
3.21     YES
 L0002365         0   0.42620E-05  584595.9 4131109.7    88.8     4.15     5.58
3.21     YES
 L0002366         0   0.42620E-05  584607.9 4131109.9    88.6     4.15     5.58
3.21     YES
 L0002367         0   0.42620E-05  584619.8 4131110.1    88.3     4.15     5.58
3.21     YES
 L0002368         0   0.42620E-05  584631.8 4131110.3    88.1     4.15     5.58
3.21     YES
 L0002369         0   0.42620E-05  584643.8 4131110.5    87.9     4.15     5.58
3.21     YES
 L0002370         0   0.42620E-05  584655.8 4131110.7    87.8     4.15     5.58
3.21     YES
 L0002371         0   0.42620E-05  584667.8 4131110.9    87.7     4.15     5.58
3.21     YES
 L0002372         0   0.42620E-05  584679.8 4131111.1    87.5     4.15     5.58
3.21     YES
 L0002373         0   0.42620E-05  584691.8 4131111.4    87.4     4.15     5.58
3.21     YES
 L0002374         0   0.42620E-05  584703.8 4131111.6    87.3     4.15     5.58
3.21     YES
 L0002375         0   0.42620E-05  584715.8 4131111.8    87.0     4.15     5.58
3.21     YES
 L0002376         0   0.42620E-05  584727.8 4131112.0    86.7     4.15     5.58
3.21     YES
 L0002377         0   0.42620E-05  584739.8 4131112.2    86.4     4.15     5.58
3.21     YES
 L0002378         0   0.42620E-05  584751.8 4131112.4    86.2     4.15     5.58
3.21     YES
 L0002379         0   0.42620E-05  584749.7 4131127.5    86.1     4.15     5.58
3.21     YES
 L0002380         0   0.42620E-05  584737.7 4131127.3    86.3     4.15     5.58
3.21     YES
 L0002381         0   0.42620E-05  584725.7 4131127.2    86.5     4.15     5.58
3.21     YES
 L0002382         0   0.42620E-05  584713.8 4131127.0    86.7     4.15     5.58
3.21     YES
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 L0002383         0   0.42620E-05  584701.8 4131126.9    86.9     4.15     5.58
3.21     YES
 L0002384         0   0.42620E-05  584689.8 4131126.7    87.2     4.15     5.58
3.21     YES
 L0002385         0   0.42620E-05  584677.8 4131126.6    87.4     4.15     5.58
3.21     YES
 L0002386         0   0.42620E-05  584665.8 4131126.5    87.6     4.15     5.58
3.21     YES
 L0002387         0   0.42620E-05  584653.8 4131126.3    87.7     4.15     5.58
3.21     YES
 L0002388         0   0.42620E-05  584641.8 4131126.2    87.9     4.15     5.58
3.21     YES
 L0002389         0   0.42620E-05  584629.8 4131126.0    88.0     4.15     5.58
3.21     YES
 L0002390         0   0.42620E-05  584617.8 4131125.9    88.2     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0002391         0   0.42620E-05  584605.8 4131125.7    88.4     4.15     5.58
3.21     YES
 L0002392         0   0.42620E-05  584593.8 4131125.6    88.6     4.15     5.58
3.21     YES
 L0002393         0   0.42620E-05  584581.8 4131125.5    88.8     4.15     5.58
3.21     YES
 L0002394         0   0.42620E-05  584569.8 4131125.3    89.0     4.15     5.58
3.21     YES
 L0002395         0   0.42620E-05  584557.8 4131125.2    89.1     4.15     5.58
3.21     YES
 L0002396         0   0.42620E-05  584545.8 4131125.0    89.2     4.15     5.58
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3.21      YES
  L0002397          0   0.42620E-05  584533.8 4131124.9    89.3      4.15      5.58
3.21      YES
  L0002398          0   0.42620E-05  584521.8 4131124.7    89.4      4.15      5.58
3.21      YES
  L0002399          0   0.42620E-05  584509.8 4131124.6    89.6      4.15      5.58
3.21      YES
  L0002400          0   0.42620E-05  584497.8 4131124.5    89.8      4.15      5.58
3.21      YES
  L0002401          0   0.42620E-05  584485.8 4131124.3    90.0      4.15      5.58
3.21      YES
  L0002402          0   0.42620E-05  584473.8 4131124.2    90.2      4.15      5.58
3.21      YES
  L0002403          0   0.42620E-05  584461.8 4131124.0    90.3      4.15      5.58
3.21      YES
  L0002404          0   0.42620E-05  584449.8 4131123.9    90.5      4.15      5.58
3.21      YES
  L0002405          0   0.42620E-05  584437.8 4131123.7    90.7      4.15      5.58
3.21      YES
  L0002406          0   0.42620E-05  584425.8 4131123.6    90.9      4.15      5.58
3.21      YES
  L0002407          0   0.42620E-05  584413.8 4131123.5    91.1      4.15      5.58
3.21      YES
  L0002408          0   0.42620E-05  584401.8 4131123.3    91.2      4.15      5.58
3.21      YES
  L0002409          0   0.42620E-05  584389.8 4131123.2    91.4      4.15      5.58
3.21      YES
  L0002410          0   0.42620E-05  584377.8 4131123.0    91.5      4.15      5.58
3.21      YES
  L0002411          0   0.42620E-05  584365.8 4131123.0    91.7      4.15      5.58
3.21      YES
  L0002412          0   0.42620E-05  584353.8 4131122.9    91.8      4.15      5.58
3.21      YES
  L0002413          0   0.42620E-05  584341.8 4131122.9    92.0      4.15      5.58
3.21      YES
  L0002414          0   0.42620E-05  584329.8 4131122.8    92.1      4.15      5.58
3.21      YES
  L0002415          0   0.42620E-05  584317.8 4131122.8    92.3      4.15      5.58
3.21      YES
  L0002416          0   0.42620E-05  584305.8 4131122.7    92.4      4.15      5.58
3.21      YES
  L0002417          0   0.42620E-05  584293.8 4131122.7    92.5      4.15      5.58
3.21      YES
  L0002418          0   0.42620E-05  584281.8 4131122.6    92.6      4.15      5.58
3.21      YES
  L0002419          0   0.42620E-05  584269.8 4131122.6    92.8      4.15      5.58
3.21      YES
  L0002420          0   0.42620E-05  584257.8 4131122.5    92.9      4.15      5.58
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3.21     YES
 L0002421         0   0.42620E-05  584245.8 4131122.5    93.1     4.15     5.58
3.21     YES
 L0002422         0   0.42620E-05  584233.8 4131122.4    93.2     4.15     5.58
3.21     YES
 L0002423         0   0.42620E-05  584221.8 4131122.4    92.5     4.15     5.58
3.21     YES
 L0002424         0   0.42620E-05  584209.8 4131122.3    91.6     4.15     5.58
3.21     YES
 L0002425         0   0.42620E-05  584197.8 4131122.3    89.8     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                           *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                 SOURCE IDs
 -----------                                                 ----------


  ALL        L0002057    , L0002058    , L0002059    , L0002060    , L0002061    ,
L0002062    , L0002063    , L0002064    ,

             L0002065    , L0002066    , L0002067    , L0002068    , L0002069    ,
L0002070    , L0002071    , L0002072    ,

             L0002073    , L0002074    , L0002075    , L0002076    , L0002077    ,
L0002078    , L0002079    , L0002080    ,

             L0002081    , L0002082    , L0002083    , L0002084    , L0002085    ,
L0002086    , L0002087    , L0002088    ,

             L0002089    , L0002090    , L0002091    , L0002092    , L0002093    ,
L0002094    , L0002095    , L0002096    ,

             L0002097    , L0002098    , L0002099    , L0002100    , L0002101    ,
L0002102    , L0002103    , L0002104    ,

             L0002105    , L0002106    , L0002107    , L0002108    , L0002109    ,
L0002110    , L0002111    , L0002112    ,
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             L0002113    , L0002114    , L0002115    , L0002116    , L0002117    ,
L0002118    , L0002119    , L0002120    ,

             L0002121    , L0002122    , L0002123    , L0002124    , L0002125    ,
L0002126    , L0002127    , L0002128    ,

             L0002129    , L0002130    , L0002131    , L0002132    , L0002133    ,
L0002134    , L0002135    , L0002136    ,

             L0002137    , L0002138    , L0002139    , L0002140    , L0002141    ,
L0002142    , L0002143    , L0002144    ,

             L0002145    , L0002146    , L0002147    , L0002148    , L0002149    ,
L0002150    , L0002151    , L0002152    ,

             L0002153    , L0002154    , L0002155    , L0002156    , L0002157    ,
L0002158    , L0002159    , L0002160    ,

             L0002161    , L0002162    , L0002163    , L0002164    , L0002165    ,
L0002166    , L0002167    , L0002168    ,

             L0002169    , L0002170    , L0002171    , L0002172    , L0002173    ,
L0002174    , L0002175    , L0002176    ,

             L0002177    , L0002178    , L0002179    , L0002180    , L0002181    ,
L0002182    , L0002183    , L0002184    ,

             L0002185    , L0002186    , L0002187    , L0002188    , L0002189    ,
L0002190    , L0002191    , L0002192    ,

             L0002193    , L0002194    , L0002195    , L0002196    , L0002197    ,
L0002198    , L0002199    , L0002200    ,

             L0002201    , L0002202    , L0002203    , L0002204    , L0002205    ,
L0002206    , L0002207    , L0002208    ,

             L0002209    , L0002210    , L0002211    , L0002212    , L0002213    ,
L0002214    , L0002215    , L0002216    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                                                  *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                 SOURCE IDs
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             L0002217    , L0002218    , L0002219    , L0002220    , L0002221    ,
L0002222    , L0002223    , L0002224    ,

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             L0002407    , L0002408    , L0002409    , L0002410    , L0002411    ,
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             L0002415    , L0002416    , L0002417    , L0002418    , L0002419    ,
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             L0002423    , L0002424    , L0002425    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***       20:49:49

                                  PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                         *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------



              1918000.   L0002057    , L0002058    , L0002059    , L0002060    ,
L0002061    , L0002062    , L0002063    ,
 L0002064    ,

             L0002065    , L0002066    , L0002067    , L0002068    , L0002069    ,
L0002070    , L0002071    , L0002072    ,

             L0002073    , L0002074    , L0002075    , L0002076    , L0002077    ,
L0002078    , L0002079    , L0002080    ,

             L0002081    , L0002082    , L0002083    , L0002084    , L0002085    ,
L0002086    , L0002087    , L0002088    ,

             L0002089    , L0002090    , L0002091    , L0002092    , L0002093    ,
L0002094    , L0002095    , L0002096    ,

             L0002097    , L0002098    , L0002099    , L0002100    , L0002101    ,
L0002102    , L0002103    , L0002104    ,

             L0002105    , L0002106    , L0002107    , L0002108    , L0002109    ,
L0002110    , L0002111    , L0002112    ,

             L0002113    , L0002114    , L0002115    , L0002116    , L0002117    ,
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L0002126    , L0002127    , L0002128    ,
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             L0002201    , L0002202    , L0002203    , L0002204    , L0002205    ,
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L0002214    , L0002215    , L0002216    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                         SOURCE IDs
  --------   ---------                                         ----------
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             L0002217    , L0002218    , L0002219    , L0002220    , L0002221    ,
L0002222    , L0002223    , L0002224    ,

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L0002230    , L0002231    , L0002232    ,

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L0002412    , L0002413    , L0002414    ,

             L0002415    , L0002416    , L0002417    , L0002418    , L0002419    ,
L0002420    , L0002421    , L0002422    ,

             L0002423    , L0002424    , L0002425    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                              ***        20:49:49

                                         PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                     *** DISCRETE CARTESIAN RECEPTORS ***
                                                   (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                  (METERS)

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     ( 584331.4, 4131146.6,      91.5,      91.5,       0.0);         ( 584351.4,
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     ( 584371.4, 4131146.6,      90.8,      90.8,       0.0);         ( 584391.4,
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     ( 584411.4, 4131146.6,      90.5,      90.5,       0.0);         ( 584431.4,
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     ( 584451.4, 4131146.6,      90.0,      90.0,       0.0);         ( 584471.4,
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     ( 584231.4, 4131166.6,      91.4,      91.4,       0.0);         ( 584251.4,
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     ( 584271.4, 4131166.6,      91.6,      91.6,       0.0);         ( 584291.4,
4131166.6,      91.5,      91.5,       0.0);
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4131166.6,      91.3,      91.3,       0.0);
     ( 584351.4, 4131166.6,      91.0,      91.0,       0.0);         ( 584371.4,
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     ( 584291.4, 4131186.6,      91.3,      91.3,       0.0);         ( 584311.4,
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     ( 584271.4, 4131246.6,      91.5,      91.5,       0.0);          ( 584291.4,
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     ( 584351.4, 4131246.6,      90.4,      90.4,       0.0);          ( 584371.4,
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     ( 584391.4, 4131246.6,      90.1,      90.1,       0.0);          ( 584411.4,
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     ( 584431.4, 4131246.6,      89.7,      89.7,       0.0);          ( 584451.4,
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     ( 584231.4, 4131266.6,      92.6,      92.6,       0.0);          ( 584251.4,
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♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                           (METERS)

     ( 584211.4, 4131286.6,      91.8,      91.8,       0.0);         ( 584231.4,
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     ( 584251.4, 4131286.6,      92.1,      92.1,       0.0);         ( 584211.4,
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     ( 584231.4, 4131306.6,      92.3,      92.3,       0.0);         ( 584191.4,
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     ( 584211.4, 4131326.6,      92.6,      92.6,       0.0);         ( 584191.4,
4131346.6,      91.0,      91.0,       0.0);
     ( 584171.4, 4131366.6,      91.8,      93.2,       0.0);         ( 584191.4,
4131366.6,      93.0,      93.0,       0.0);
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                               (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
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1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                           (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,
10.80,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***       20:49:49

                                   PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                    *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   Met Data\745090.SFC
                  Met Version:  14134
   Profile file:   Met Data\745090.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:    23244                 Upper air station no.:    23230
                  Name: UNKNOWN                                 Name:
OAKLAND/WSO_AP
                  Year:   2009                                  Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
```

```
 09 01 01   1 01  -12.1  0.213 -9.000 -9.000 -999.  236.     72.6  0.09   0.54
1.00    2.86    1.   10.0  282.5    2.0
 09 01 01   1 02  -14.9  0.261 -9.000 -9.000 -999.  321.    109.2  0.09   0.54
1.00    3.36   18.   10.0  282.0    2.0
 09 01 01   1 03   -9.1  0.160 -9.000 -9.000 -999.  158.     40.7  0.09   0.54
1.00    2.36   24.   10.0  282.0    2.0
 09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.4    2.0
 09 01 01   1 05   -3.9  0.075 -9.000 -9.000 -999.   49.      9.8  0.09   0.54
1.00    1.76   23.   10.0  281.4    2.0
 09 01 01   1 06   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36    2.   10.0  280.9    2.0
 09 01 01   1 07   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36   15.   10.0  280.9    2.0
 09 01 01   1 08   -4.7  0.084 -9.000 -9.000 -999.   61.     11.7  0.15   0.54
0.73    1.76  323.   10.0  280.9    2.0
 09 01 01   1 09   -4.9  0.212 -9.000 -9.000 -999.  234.    179.0  0.15   0.54
0.38    2.36  357.   10.0  280.4    2.0
 09 01 01   1 10    5.7  0.163  0.241  0.014   89.  159.    -69.3  0.09   0.54
0.25    1.76   11.   10.0  280.9    2.0
 09 01 01   1 11   12.2 -9.000 -9.000 -9.000  158. -999. -99999.0  0.24   0.54
0.21    0.00    0.   10.0  280.9    2.0
 09 01 01   1 12   16.0  0.426  0.456  0.016  216.  668.   -442.4  0.15   0.54
0.19    4.36  346.   10.0  281.4    2.0
 09 01 01   1 13   16.6  0.236  0.493  0.015  263.  305.    -71.8  0.36   0.54
0.19    1.76  253.   10.0  281.4    2.0
 09 01 01   1 14   14.2 -9.000 -9.000 -9.000  297. -999. -99999.0  0.24   0.54
0.20    0.00    0.   10.0  282.0    2.0
 09 01 01   1 15   44.9 -9.000 -9.000 -9.000  387. -999. -99999.0  0.24   0.54
0.23    0.00    0.   10.0  283.8    2.0
 09 01 01   1 16   13.2 -9.000 -9.000 -9.000  410. -999. -99999.0  0.24   0.54
0.31    0.00    0.   10.0  284.1    2.0
 09 01 01   1 17  -12.3  0.130 -9.000 -9.000 -999.  112.     16.2  0.15   0.54
0.55    2.36  351.   10.0  282.1    2.0
 09 01 01   1 18   -9.3  0.106 -9.000 -9.000 -999.   83.     11.6  0.36   0.54
1.00    1.76  297.   10.0  282.1    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  280.1    2.0
```

```
 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 09 01 01 01   10.0 1    1.    2.86   282.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  18081 ***   *** 
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc *** 
08/22/18
 *** AERMET - VERSION  14134 ***   *** 
                       ***       20:49:49

                                 PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5 
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0002057    , L0002058   
 , L0002059    , L0002060    , L0002061    , 
                 L0002062    , L0002063    , L0002064    , L0002065    , L0002066   
 , L0002067    , L0002068    , L0002069    , 
                 L0002070    , L0002071    , L0002072    , L0002073    , L0002074   
 , L0002075    , L0002076    , L0002077    , 
                 L0002078    , L0002079    , L0002080    , L0002081    , L0002082   
 , L0002083    , L0002084    ,  . . .      , 

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS 
***

                                       ** CONC OF PM_2.5   IN MICROGRAMS/M**3      
                    **

       X-COORD (M)   Y-COORD (M)        CONC                          X-COORD (M)  
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
- - - - - - - - - - - - - - - - - - - - - - - -
         584291.38    4131146.65        0.01848                         584311.38  
4131146.65        0.01903
         584331.38    4131146.65        0.01944                         584351.38  
4131146.65        0.01961
         584371.38    4131146.65        0.01975                         584391.38  
4131146.65        0.02006
         584411.38    4131146.65        0.02040                         584431.38  
4131146.65        0.02066
         584451.38    4131146.65        0.02077                         584471.38  
4131146.65        0.02114
         584491.38    4131146.65        0.02129                         584511.38  
```

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4131146.65        0.02126
         584231.38    4131166.65        0.01095                             584251.38
4131166.65        0.01185
         584271.38    4131166.65        0.01244                             584291.38
4131166.65        0.01290
         584311.38    4131166.65        0.01331                             584331.38
4131166.65        0.01364
         584351.38    4131166.65        0.01383                             584371.38
4131166.65        0.01400
         584391.38    4131166.65        0.01417                             584411.38
4131166.65        0.01434
         584431.38    4131166.65        0.01449                             584451.38
4131166.65        0.01455
         584471.38    4131166.65        0.01476                             584491.38
4131166.65        0.01481
         584511.38    4131166.65        0.01476                             584231.38
4131186.65        0.00836
         584251.38    4131186.65        0.00898                             584271.38
4131186.65        0.00943
         584291.38    4131186.65        0.00980                             584311.38
4131186.65        0.01011
         584331.38    4131186.65        0.01037                             584351.38
4131186.65        0.01055
         584371.38    4131186.65        0.01072                             584391.38
4131186.65        0.01084
         584411.38    4131186.65        0.01094                             584431.38
4131186.65        0.01103
         584451.38    4131186.65        0.01107                             584471.38
4131186.65        0.01118
         584491.38    4131186.65        0.01119                             584511.38
4131186.65        0.01115
         584231.38    4131206.65        0.00684                             584251.38
4131206.65        0.00723
         584271.38    4131206.65        0.00756                             584291.38
4131206.65        0.00785
         584311.38    4131206.65        0.00809                             584331.38
4131206.65        0.00828
         584351.38    4131206.65        0.00844                             584371.38
4131206.65        0.00858
         584391.38    4131206.65        0.00868                             584411.38
4131206.65        0.00876
         584431.38    4131206.65        0.00882                             584451.38
4131206.65        0.00883
         584471.38    4131206.65        0.00887                             584491.38
4131206.65        0.00886
         584211.38    4131226.65        0.00525                             584231.38
4131226.65        0.00571
         584251.38    4131226.65        0.00602                             584271.38
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4131226.65        0.00628
         584291.38    4131226.65        0.00650                            584311.38
4131226.65        0.00669
         584331.38    4131226.65        0.00684                            584351.38
4131226.65        0.00697
         584371.38    4131226.65        0.00708                            584391.38
4131226.65        0.00717
         584411.38    4131226.65        0.00724                            584431.38
4131226.65        0.00728
         584451.38    4131226.65        0.00727                            584471.38
4131226.65        0.00729
         584491.38    4131226.65        0.00727                            584211.38
4131246.65        0.00455
         584231.38    4131246.65        0.00489                            584251.38
4131246.65        0.00514
         584271.38    4131246.65        0.00535                            584291.38
4131246.65        0.00552
         584311.38    4131246.65        0.00567                            584331.38
4131246.65        0.00579
         584351.38    4131246.65        0.00590                            584371.38
4131246.65        0.00598
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                    INCLUDING SOURCE(S):     L0002057    , L0002058
 , L0002059    , L0002060    , L0002061    ,
                 L0002062    , L0002063    , L0002064    , L0002065    , L0002066
 , L0002067    , L0002068    , L0002069    ,
                 L0002070    , L0002071    , L0002072    , L0002073    , L0002074
 , L0002075    , L0002076    , L0002077    ,
                 L0002078    , L0002079    , L0002080    , L0002081    , L0002082
 , L0002083    , L0002084    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                         X-COORD (M)
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Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
         584391.38    4131246.65        0.00606                            584411.38
4131246.65        0.00612
         584431.38    4131246.65        0.00615                            584451.38
4131246.65        0.00613
         584471.38    4131246.65        0.00614                            584211.38
4131266.65        0.00406
         584231.38    4131266.65        0.00427                            584251.38
4131266.65        0.00447
         584271.38    4131266.65        0.00464                            584291.38
4131266.65        0.00478
         584211.38    4131286.65        0.00362                            584231.38
4131286.65        0.00378
         584251.38    4131286.65        0.00394                            584211.38
4131306.65        0.00325
         584231.38    4131306.65        0.00339                            584191.38
4131326.65        0.00282
         584211.38    4131326.65        0.00295                            584191.38
4131346.65        0.00260
         584171.38    4131366.65        0.00230                            584191.38
4131366.65        0.00238
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0002057    , L0002058
 , L0002059    , L0002060    , L0002061    ,
                 L0002062    , L0002063    , L0002064    , L0002065    , L0002066
 , L0002067    , L0002068    , L0002069    ,
                 L0002070    , L0002071    , L0002072    , L0002073    , L0002074
 , L0002075    , L0002076    , L0002077    ,
                 L0002078    , L0002079    , L0002080    , L0002081    , L0002082
 , L0002083    , L0002084    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **
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      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
        584291.38   4131146.65        0.07926  (11011505)                584311.38
 4131146.65        0.07993  (09021919)
        584331.38   4131146.65        0.08057  (09021919)                584351.38
 4131146.65        0.08053  (09021919)
        584371.38   4131146.65        0.08052  (09021919)                584391.38
 4131146.65        0.08102  (09021919)
        584411.38   4131146.65        0.08158  (09021919)                584431.38
 4131146.65        0.08188  (09021919)
        584451.38   4131146.65        0.08172  (09021919)                584471.38
 4131146.65        0.08203  (09021919)
        584491.38   4131146.65        0.08208  (10120502)                584511.38
 4131146.65        0.08185  (10120502)
        584231.38   4131166.65        0.05595  (09021919)                584251.38
 4131166.65        0.05780  (09021919)
        584271.38   4131166.65        0.05872  (09021919)                584291.38
 4131166.65        0.05938  (09021919)
        584311.38   4131166.65        0.06016  (12120320)                584331.38
 4131166.65        0.06076  (12120320)
        584351.38   4131166.65        0.06101  (12120320)                584371.38
 4131166.65        0.06124  (12120320)
        584391.38   4131166.65        0.06147  (12120320)                584411.38
 4131166.65        0.06172  (12120320)
        584431.38   4131166.65        0.06189  (12120320)                584451.38
 4131166.65        0.06174  (12120320)
        584471.38   4131166.65        0.06190  (12120320)                584491.38
 4131166.65        0.06160  (12120320)
        584511.38   4131166.65        0.06093  (12120320)                584231.38
 4131186.65        0.04569  (12120320)
        584251.38   4131186.65        0.04700  (12120320)                584271.38
 4131186.65        0.04782  (12120320)
        584291.38   4131186.65        0.04847  (12120320)                584311.38
 4131186.65        0.04897  (12120320)
        584331.38   4131186.65        0.04938  (12120320)                584351.38
 4131186.65        0.04959  (12120320)
        584371.38   4131186.65        0.04975  (12120320)                584391.38
 4131186.65        0.04974  (12120320)
        584411.38   4131186.65        0.04967  (12120320)                584431.38
 4131186.65        0.04953  (12120320)
        584451.38   4131186.65        0.04917  (12120320)                584471.38
 4131186.65        0.04891  (12120320)
        584491.38   4131186.65        0.04862  (12010208)                584511.38
 4131186.65        0.04805  (12010208)
        584231.38   4131206.65        0.03917  (12120320)                584251.38
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 4131206.65        0.03983  (12120320)
        584271.38   4131206.65        0.04035  (12120320)                584291.38
 4131206.65        0.04077  (12120320)
        584311.38   4131206.65        0.04108  (12120320)                584331.38
 4131206.65        0.04128  (12120320)
        584351.38   4131206.65        0.04134  (12120320)                584371.38
 4131206.65        0.04134  (12120320)
        584391.38   4131206.65        0.04121  (12120320)                584411.38
 4131206.65        0.04108  (12010208)
        584431.38   4131206.65        0.04098  (12010208)                584451.38
 4131206.65        0.04068  (12010208)
        584471.38   4131206.65        0.04045  (10013002)                584491.38
 4131206.65        0.04018  (10013002)
        584211.38   4131226.65        0.03292  (12120320)                584231.38
 4131226.65        0.03388  (12120320)
        584251.38   4131226.65        0.03438  (12120320)                584271.38
 4131226.65        0.03473  (12120320)
        584291.38   4131226.65        0.03498  (12120320)                584311.38
 4131226.65        0.03511  (12120320)
        584331.38   4131226.65        0.03512  (12120320)                584351.38
 4131226.65        0.03521  (12010208)
        584371.38   4131226.65        0.03526  (12010208)                584391.38
 4131226.65        0.03523  (12010208)
        584411.38   4131226.65        0.03510  (12010208)                584431.38
 4131226.65        0.03505  (10013002)
        584451.38   4131226.65        0.03479  (10013002)                584471.38
 4131226.65        0.03476  (11021419)
        584491.38   4131226.65        0.03457  (11021419)                584211.38
 4131246.65        0.02912  (12120320)
        584231.38   4131246.65        0.02985  (12120320)                584251.38
 4131246.65        0.03012  (12120320)
        584271.38   4131246.65        0.03029  (12120320)                584291.38
 4131246.65        0.03049  (12010208)
        584311.38   4131246.65        0.03066  (12010208)                584331.38
 4131246.65        0.03074  (12010208)
        584351.38   4131246.65        0.03075  (12010208)                584371.38
 4131246.65        0.03076  (10013002)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
```

```
                                    INCLUDING SOURCE(S):     L0002057    , L0002058
 , L0002059    , L0002060    , L0002061    ,
                 L0002062    , L0002063    , L0002064    , L0002065    , L0002066
 , L0002067    , L0002068    , L0002069    ,
                 L0002070    , L0002071    , L0002072    , L0002073    , L0002074
 , L0002075    , L0002076    , L0002077    ,
                 L0002078    , L0002079    , L0002080    , L0002081    , L0002082
 , L0002083    , L0002084    ,  . . .      ,

                                                   *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                              ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584391.38   4131246.65        0.03081  (10013002)                584411.38
 4131246.65        0.03086  (11021419)
        584431.38   4131246.65        0.03087  (11021419)                584451.38
 4131246.65        0.03065  (11021419)
        584471.38   4131246.65        0.03057  (11021419)                584211.38
 4131266.65        0.02620  (12120320)
        584231.38   4131266.65        0.02675  (12120320)                584251.38
 4131266.65        0.02671  (12010208)
        584271.38   4131266.65        0.02696  (12010208)                584291.38
 4131266.65        0.02715  (12010208)
        584211.38   4131286.65        0.02377  (12010208)                584231.38
 4131286.65        0.02406  (12120320)
        584251.38   4131286.65        0.02409  (12010208)                584211.38
 4131306.65        0.02195  (12120320)
        584231.38   4131306.65        0.02181  (12010208)                584191.38
 4131326.65        0.01986  (10013002)
        584211.38   4131326.65        0.02016  (12120320)                584191.38
 4131346.65        0.01869  (11021419)
        584171.38   4131366.65        0.01737  (11021419)                584191.38
 4131366.65        0.01798  (09123123)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                         ***        20:49:49

                                    PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

```
                                       *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                            INCLUDING SOURCE(S):     L0002057    , L0002058
 , L0002059    , L0002060    , L0002061    ,
                L0002062    , L0002063    , L0002064    , L0002065    , L0002066
 , L0002067    , L0002068    , L0002069    ,
                L0002070    , L0002071    , L0002072    , L0002073    , L0002074
 , L0002075    , L0002076    , L0002077    ,
                L0002078    , L0002079    , L0002080    , L0002081    , L0002082
 , L0002083    , L0002084    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584291.38   4131146.65        0.04182b (13111924)                584311.38
 4131146.65        0.04273b (13111924)
        584331.38   4131146.65        0.04334b (13111924)                584351.38
 4131146.65        0.04341b (13111924)
        584371.38   4131146.65        0.04350b (13111924)                584391.38
 4131146.65        0.04405b (13111924)
        584411.38   4131146.65        0.04469b (13111924)                584431.38
 4131146.65        0.04516b (13111924)
        584451.38   4131146.65        0.04528b (13111924)                584471.38
 4131146.65        0.04603b (13111924)
        584491.38   4131146.65        0.04627b (13111924)                584511.38
 4131146.65        0.04613b (13111924)
        584231.38   4131166.65        0.02846b (13111924)                584251.38
 4131166.65        0.02998b (13111924)
        584271.38   4131166.65        0.03083b (13111924)                584291.38
 4131166.65        0.03150b (13111924)
        584311.38   4131166.65        0.03215b (13111924)                584331.38
 4131166.65        0.03265b (13111924)
        584351.38   4131166.65        0.03286b (13111924)                584371.38
 4131166.65        0.03309b (13111924)
        584391.38   4131166.65        0.03334b (13111924)                584411.38
 4131166.65        0.03362b (13111924)
        584431.38   4131166.65        0.03389b (13111924)                584451.38
 4131166.65        0.03392b (13111924)
        584471.38   4131166.65        0.03434b (13111924)                584491.38
 4131166.65        0.03439b (13111924)
        584511.38   4131166.65        0.03420b (13111924)                584231.38
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4131186.65        0.02291b (13111924)
       584251.38   4131186.65        0.02396b (13111924)                 584271.38
4131186.65        0.02465b (13111924)
       584291.38   4131186.65        0.02520b (13111924)                 584311.38
4131186.65        0.02567b (13111924)
       584331.38   4131186.65        0.02606b (13111924)                 584351.38
4131186.65        0.02630b (13111924)
       584371.38   4131186.65        0.02655b (13111924)                 584391.38
4131186.65        0.02669b (13111924)
       584411.38   4131186.65        0.02681b (13111924)                 584431.38
4131186.65        0.02694b (13111924)
       584451.38   4131186.65        0.02693b (13111924)                 584471.38
4131186.65        0.02712b (13111924)
       584491.38   4131186.65        0.02709b (13111924)                 584511.38
4131186.65        0.02689b (13111924)
       584231.38   4131206.65        0.02019b (10012224)                 584251.38
4131206.65        0.02044b (10012224)
       584271.38   4131206.65        0.02077b (10012224)                 584291.38
4131206.65        0.02111b (10012224)
       584311.38   4131206.65        0.02137b (10012224)                 584331.38
4131206.65        0.02159b (13111924)
       584351.38   4131206.65        0.02179b (13111924)                 584371.38
4131206.65        0.02198b (13111924)
       584391.38   4131206.65        0.02211b (13111924)                 584411.38
4131206.65        0.02220b (13111924)
       584431.38   4131206.65        0.02223b (13111924)                 584451.38
4131206.65        0.02216b (13111924)
       584471.38   4131206.65        0.02219b (13111924)                 584491.38
4131206.65        0.02207b (13111924)
       584211.38   4131226.65        0.01647b (10012224)                 584231.38
4131226.65        0.01778b (10012224)
       584251.38   4131226.65        0.01801b (10012224)                 584271.38
4131226.65        0.01825b (10012224)
       584291.38   4131226.65        0.01848b (10012224)                 584311.38
4131226.65        0.01867b (10012224)
       584331.38   4131226.65        0.01878b (10012224)                 584351.38
4131226.65        0.01890b (10012224)
       584371.38   4131226.65        0.01899b (10012224)                 584391.38
4131226.65        0.01908b (10012224)
       584411.38   4131226.65        0.01913b (10012224)                 584431.38
4131226.65        0.01911b (10012224)
       584451.38   4131226.65        0.01894b (10012224)                 584471.38
4131226.65        0.01891b (10012224)
       584491.38   4131226.65        0.01875b (10012224)                 584211.38
4131246.65        0.01479b (10012224)
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4131246.65        0.01608b (10012224)
       584271.38   4131246.65        0.01626b (10012224)                 584291.38
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 4131246.65        0.01642b (10012224)
        584311.38   4131246.65        0.01654b (10012224)                584331.38
 4131246.65        0.01663b (10012224)
        584351.38   4131246.65        0.01672b (10012224)                584371.38
 4131246.65        0.01677b (10012224)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0002057    , L0002058
 , L0002059    , L0002060    , L0002061    ,
                 L0002062    , L0002063    , L0002064    , L0002065    , L0002066
 , L0002067    , L0002068    , L0002069    ,
                 L0002070    , L0002071    , L0002072    , L0002073    , L0002074
 , L0002075    , L0002076    , L0002077    ,
                 L0002078    , L0002079    , L0002080    , L0002081    , L0002082
 , L0002083    , L0002084    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584391.38   4131246.65        0.01683b (10012224)                584411.38
 4131246.65        0.01687b (10012224)
        584431.38   4131246.65        0.01683b (10012224)                584451.38
 4131246.65        0.01663b (10012224)
        584471.38   4131246.65        0.01657b (10012224)                584211.38
 4131266.65        0.01376b (10012224)
        584231.38   4131266.65        0.01428b (10012224)                584251.38
 4131266.65        0.01450b (10012224)
        584271.38   4131266.65        0.01465b (10012224)                584291.38
 4131266.65        0.01476b (10012224)
        584211.38   4131286.65        0.01273b (10012224)                584231.38
 4131286.65        0.01301b (10012224)
        584251.38   4131286.65        0.01320b (10012224)                584211.38
```

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 4131306.65        0.01172b (10012224)
       584231.38   4131306.65        0.01196b (10012224)                584191.38
 4131326.65        0.01043b (10012224)
       584211.38   4131326.65        0.01085b (10012224)                584191.38
 4131346.65        0.00988b (10012224)
       584171.38   4131366.65        0.00902b (10012224)                584191.38
 4131366.65        0.00926b (10012224)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***


                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                **



                         NETWORK
GROUP ID                      AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS       0.02129 AT (  584491.38,  4131146.65,
89.80,    89.80,    0.00)  DC
          2ND HIGHEST VALUE IS       0.02126 AT (  584511.38,  4131146.65,
89.29,    89.29,    0.00)  DC
          3RD HIGHEST VALUE IS       0.02114 AT (  584471.38,  4131146.65,
90.08,    90.08,    0.00)  DC
          4TH HIGHEST VALUE IS       0.02077 AT (  584451.38,  4131146.65,
90.04,    90.04,    0.00)  DC
          5TH HIGHEST VALUE IS       0.02066 AT (  584431.38,  4131146.65,
90.39,    90.39,    0.00)  DC
          6TH HIGHEST VALUE IS       0.02040 AT (  584411.38,  4131146.65,
90.54,    90.54,    0.00)  DC
          7TH HIGHEST VALUE IS       0.02006 AT (  584391.38,  4131146.65,
90.61,    90.61,    0.00)  DC
          8TH HIGHEST VALUE IS       0.01975 AT (  584371.38,  4131146.65,
90.75,    90.75,    0.00)  DC
          9TH HIGHEST VALUE IS       0.01961 AT (  584351.38,  4131146.65,
91.09,    91.09,    0.00)  DC
```

```
         10TH HIGHEST VALUE IS       0.01944 AT (  584331.38,  4131146.65,
91.48,    91.48,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                               *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                **

                                                          DATE
                                             NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.08208  ON 10120502: AT (  584491.38,
4131146.65,    89.80,    89.80,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

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                                                *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                ** 

                                                      DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.04627b ON 13111924: AT (  584491.38,
4131146.65,    89.80,    89.80,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_SR-85_PM\Westport_SR-85_PM.isc ***
08/22/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        20:49:49

                                   PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of          182 Warning Message(s)
 A Total of        15496 Informational Message(s)

 A Total of        43872 Hours Were Processed

 A Total of        14061 Calm Hours Identified

 A Total of         1435 Missing Hours Identified (  3.27 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***
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   ********   WARNING MESSAGES   ********
SO W320     386         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     387         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     388         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     389         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     390         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     391         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     392         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     393         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     394         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     395         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     396         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     397         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     398         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     399         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     400         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     401         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     402         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     403         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     404         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     405         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     406         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     407         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     408         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     409        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     410        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     411        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     412        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     413        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     414        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     421        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     432        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      433         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      510         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      511         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      512         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      513         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      514         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      515         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      516         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      517         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      518         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      519         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      520         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      521         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      522         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      523         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      524         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      525         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      526         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      527         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      528         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      529         VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      530         VPARM: Input Parameter May Be Out-of-Range for Parameter
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       QS
SO W320     531        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     532        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     533        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     534        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     535        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     536        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     537        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     538        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     539        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     540        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     541        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     542        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     543        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     544        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     545        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     546        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     547        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     548        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     549        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     550        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     551        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     552        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     553        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     554        VPARM: Input Parameter May Be Out-of-Range for Parameter
```

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       QS
SO W320     555        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     556        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     557        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     558        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     559        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     560        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     561        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     562        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     563        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     564        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     565        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     566        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     567        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     568        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
MX W481   43873         MAIN: Data Remaining After End of Year. Number of Hours=
       48

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
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**
***************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/18/2018
** File:
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_TOG\Westport_StevensCrk_TOG.ADI
**
***************************************
**
**
***************************************
** AERMOD Control Pathway
***************************************
**
**
CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID TOG
   RUNORNOT RUN
   ERRORFIL Westport_StevensCrk_TOG.err
CO FINISHED
**
***************************************
** AERMOD Source Pathway
***************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
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** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
** 584111.110, 4131460.295, 89.98, 4.15, 5.58
** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001876     VOLUME   584315.876 4130704.140 92.19
   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
   LOCATION L0001903     VOLUME   584203.622 4131007.644 88.17
   LOCATION L0001904     VOLUME   584200.842 4131019.317 87.96
   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
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LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001947     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
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   LOCATION L0001965     VOLUME   584004.604 4131719.942 92.58
   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
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** 584025.388, 4131653.752, 91.64, 4.15, 5.58
** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
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LOCATION L0001992     VOLUME   584089.956 4131450.711 89.21
LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002012     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002024     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002026     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
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   LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.002638
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0002151     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0002152     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0002153     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0002154     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0002155     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0002156     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0002157     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0002158     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0002159     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0002160     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0002161     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0002162     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0002163     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0002164     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0002165     VOLUME   584367.886 4131105.823 91.93
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   LOCATION L0002166     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0002167     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0002168     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0002169     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0002170     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0002171     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0002172     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0002173     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0002174     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0002175     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0002176     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0002177     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0002178     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0002179     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0002180     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0002181     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0002182     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0002183     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0002184     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0002185     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0002186     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0002187     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0002188     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0002189     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0002190     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0002191     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0002192     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0002193     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0002194     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0002195     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0002196     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0002197     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
** --------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.002638
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0002198     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0002199     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0002200     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0002201     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0002202     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0002203     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0002204     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0002205     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0002206     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0002207     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0002208     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0002209     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0002210     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0002211     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0002212     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0002213     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0002214     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0002215     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0002216     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0002217     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0002218     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0002219     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0002220     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0002221     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0002222     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0002223     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0002224     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0002225     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0002226     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0002227     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0002228     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0002229     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0002230     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0002231     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0002232     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0002233     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0002234     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0002235     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0002236     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0002237     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0002238     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0002239     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0002240     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0002241     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0002242     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0002243     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0002244     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
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** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001876           0.0      4.15      5.58      2.93
   SRCPARAM L0001877           0.0      4.15      5.58      2.93
   SRCPARAM L0001878           0.0      4.15      5.58      2.93
   SRCPARAM L0001879           0.0      4.15      5.58      2.93
   SRCPARAM L0001880           0.0      4.15      5.58      2.93
   SRCPARAM L0001881           0.0      4.15      5.58      2.93
   SRCPARAM L0001882           0.0      4.15      5.58      2.93
   SRCPARAM L0001883           0.0      4.15      5.58      2.93
   SRCPARAM L0001884           0.0      4.15      5.58      2.93
   SRCPARAM L0001885           0.0      4.15      5.58      2.93
   SRCPARAM L0001886           0.0      4.15      5.58      2.93
   SRCPARAM L0001887           0.0      4.15      5.58      2.93
   SRCPARAM L0001888           0.0      4.15      5.58      2.93
   SRCPARAM L0001889           0.0      4.15      5.58      2.93
   SRCPARAM L0001890           0.0      4.15      5.58      2.93
   SRCPARAM L0001891           0.0      4.15      5.58      2.93
   SRCPARAM L0001892           0.0      4.15      5.58      2.93
   SRCPARAM L0001893           0.0      4.15      5.58      2.93
   SRCPARAM L0001894           0.0      4.15      5.58      2.93
   SRCPARAM L0001895           0.0      4.15      5.58      2.93
   SRCPARAM L0001896           0.0      4.15      5.58      2.93
   SRCPARAM L0001897           0.0      4.15      5.58      2.93
   SRCPARAM L0001898           0.0      4.15      5.58      2.93
   SRCPARAM L0001899           0.0      4.15      5.58      2.93
   SRCPARAM L0001900           0.0      4.15      5.58      2.93
   SRCPARAM L0001901           0.0      4.15      5.58      2.93
   SRCPARAM L0001902           0.0      4.15      5.58      2.93
   SRCPARAM L0001903           0.0      4.15      5.58      2.93
   SRCPARAM L0001904           0.0      4.15      5.58      2.93
   SRCPARAM L0001905           0.0      4.15      5.58      2.93
   SRCPARAM L0001906           0.0      4.15      5.58      2.93
   SRCPARAM L0001907           0.0      4.15      5.58      2.93
   SRCPARAM L0001908           0.0      4.15      5.58      2.93
   SRCPARAM L0001909           0.0      4.15      5.58      2.93
   SRCPARAM L0001910           0.0      4.15      5.58      2.93
   SRCPARAM L0001911           0.0      4.15      5.58      2.93
   SRCPARAM L0001912           0.0      4.15      5.58      2.93
   SRCPARAM L0001913           0.0      4.15      5.58      2.93
   SRCPARAM L0001914           0.0      4.15      5.58      2.93
   SRCPARAM L0001915           0.0      4.15      5.58      2.93
   SRCPARAM L0001916           0.0      4.15      5.58      2.93
   SRCPARAM L0001917           0.0      4.15      5.58      2.93
   SRCPARAM L0001918           0.0      4.15      5.58      2.93
   SRCPARAM L0001919           0.0      4.15      5.58      2.93
   SRCPARAM L0001920           0.0      4.15      5.58      2.93
   SRCPARAM L0001921           0.0      4.15      5.58      2.93
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   SRCPARAM L0001922           0.0      4.15      5.58      2.93
   SRCPARAM L0001923           0.0      4.15      5.58      2.93
   SRCPARAM L0001924           0.0      4.15      5.58      2.93
   SRCPARAM L0001925           0.0      4.15      5.58      2.93
   SRCPARAM L0001926           0.0      4.15      5.58      2.93
   SRCPARAM L0001927           0.0      4.15      5.58      2.93
   SRCPARAM L0001928           0.0      4.15      5.58      2.93
   SRCPARAM L0001929           0.0      4.15      5.58      2.93
   SRCPARAM L0001930           0.0      4.15      5.58      2.93
   SRCPARAM L0001931           0.0      4.15      5.58      2.93
   SRCPARAM L0001932           0.0      4.15      5.58      2.93
   SRCPARAM L0001933           0.0      4.15      5.58      2.93
   SRCPARAM L0001934           0.0      4.15      5.58      2.93
   SRCPARAM L0001935           0.0      4.15      5.58      2.93
   SRCPARAM L0001936           0.0      4.15      5.58      2.93
   SRCPARAM L0001937           0.0      4.15      5.58      2.93
   SRCPARAM L0001938           0.0      4.15      5.58      2.93
   SRCPARAM L0001939           0.0      4.15      5.58      2.93
   SRCPARAM L0001940           0.0      4.15      5.58      2.93
   SRCPARAM L0001941           0.0      4.15      5.58      2.93
   SRCPARAM L0001942           0.0      4.15      5.58      2.93
   SRCPARAM L0001943           0.0      4.15      5.58      2.93
   SRCPARAM L0001944           0.0      4.15      5.58      2.93
   SRCPARAM L0001945           0.0      4.15      5.58      2.93
   SRCPARAM L0001946           0.0      4.15      5.58      2.93
   SRCPARAM L0001947           0.0      4.15      5.58      2.93
   SRCPARAM L0001948           0.0      4.15      5.58      2.93
   SRCPARAM L0001949           0.0      4.15      5.58      2.93
   SRCPARAM L0001950           0.0      4.15      5.58      2.93
   SRCPARAM L0001951           0.0      4.15      5.58      2.93
   SRCPARAM L0001952           0.0      4.15      5.58      2.93
   SRCPARAM L0001953           0.0      4.15      5.58      2.93
   SRCPARAM L0001954           0.0      4.15      5.58      2.93
   SRCPARAM L0001955           0.0      4.15      5.58      2.93
   SRCPARAM L0001956           0.0      4.15      5.58      2.93
   SRCPARAM L0001957           0.0      4.15      5.58      2.93
   SRCPARAM L0001958           0.0      4.15      5.58      2.93
   SRCPARAM L0001959           0.0      4.15      5.58      2.93
   SRCPARAM L0001960           0.0      4.15      5.58      2.93
   SRCPARAM L0001961           0.0      4.15      5.58      2.93
   SRCPARAM L0001962           0.0      4.15      5.58      2.93
   SRCPARAM L0001963           0.0      4.15      5.58      2.93
   SRCPARAM L0001964           0.0      4.15      5.58      2.93
   SRCPARAM L0001965           0.0      4.15      5.58      2.93
   SRCPARAM L0001966           0.0      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001967           0.0      4.15      5.58      3.21
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SRCPARAM L0001968           0.0      4.15      5.58      3.21
SRCPARAM L0001969           0.0      4.15      5.58      3.21
SRCPARAM L0001970           0.0      4.15      5.58      3.21
SRCPARAM L0001971           0.0      4.15      5.58      3.21
SRCPARAM L0001972           0.0      4.15      5.58      3.21
SRCPARAM L0001973           0.0      4.15      5.58      3.21
SRCPARAM L0001974           0.0      4.15      5.58      3.21
SRCPARAM L0001975           0.0      4.15      5.58      3.21
SRCPARAM L0001976           0.0      4.15      5.58      3.21
SRCPARAM L0001977           0.0      4.15      5.58      3.21
SRCPARAM L0001978           0.0      4.15      5.58      3.21
SRCPARAM L0001979           0.0      4.15      5.58      3.21
SRCPARAM L0001980           0.0      4.15      5.58      3.21
SRCPARAM L0001981           0.0      4.15      5.58      3.21
SRCPARAM L0001982           0.0      4.15      5.58      3.21
SRCPARAM L0001983           0.0      4.15      5.58      3.21
SRCPARAM L0001984           0.0      4.15      5.58      3.21
SRCPARAM L0001985           0.0      4.15      5.58      3.21
SRCPARAM L0001986           0.0      4.15      5.58      3.21
SRCPARAM L0001987           0.0      4.15      5.58      3.21
SRCPARAM L0001988           0.0      4.15      5.58      3.21
SRCPARAM L0001989           0.0      4.15      5.58      3.21
SRCPARAM L0001990           0.0      4.15      5.58      3.21
SRCPARAM L0001991           0.0      4.15      5.58      3.21
SRCPARAM L0001992           0.0      4.15      5.58      3.21
SRCPARAM L0001993           0.0      4.15      5.58      3.21
SRCPARAM L0001994           0.0      4.15      5.58      3.21
SRCPARAM L0001995           0.0      4.15      5.58      3.21
SRCPARAM L0001996           0.0      4.15      5.58      3.21
SRCPARAM L0001997           0.0      4.15      5.58      3.21
SRCPARAM L0001998           0.0      4.15      5.58      3.21
SRCPARAM L0001999           0.0      4.15      5.58      3.21
SRCPARAM L0002000           0.0      4.15      5.58      3.21
SRCPARAM L0002001           0.0      4.15      5.58      3.21
SRCPARAM L0002002           0.0      4.15      5.58      3.21
SRCPARAM L0002003           0.0      4.15      5.58      3.21
SRCPARAM L0002004           0.0      4.15      5.58      3.21
SRCPARAM L0002005           0.0      4.15      5.58      3.21
SRCPARAM L0002006           0.0      4.15      5.58      3.21
SRCPARAM L0002007           0.0      4.15      5.58      3.21
SRCPARAM L0002008           0.0      4.15      5.58      3.21
SRCPARAM L0002009           0.0      4.15      5.58      3.21
SRCPARAM L0002010           0.0      4.15      5.58      3.21
SRCPARAM L0002011           0.0      4.15      5.58      3.21
SRCPARAM L0002012           0.0      4.15      5.58      3.21
SRCPARAM L0002013           0.0      4.15      5.58      3.21
SRCPARAM L0002014           0.0      4.15      5.58      3.21
SRCPARAM L0002015           0.0      4.15      5.58      3.21
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   SRCPARAM L0002018          0.0      4.15      5.58      3.21
   SRCPARAM L0002019          0.0      4.15      5.58      3.21
   SRCPARAM L0002020          0.0      4.15      5.58      3.21
   SRCPARAM L0002021          0.0      4.15      5.58      3.21
   SRCPARAM L0002022          0.0      4.15      5.58      3.21
   SRCPARAM L0002023          0.0      4.15      5.58      3.21
   SRCPARAM L0002024          0.0      4.15      5.58      3.21
   SRCPARAM L0002025          0.0      4.15      5.58      3.21
   SRCPARAM L0002026          0.0      4.15      5.58      3.21
   SRCPARAM L0002027          0.0      4.15      5.58      3.21
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   SRCPARAM L0002030          0.0      4.15      5.58      3.21
   SRCPARAM L0002031          0.0      4.15      5.58      3.21
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   SRCPARAM L0002041          0.0      4.15      5.58      3.21
   SRCPARAM L0002042          0.0      4.15      5.58      3.21
   SRCPARAM L0002043          0.0      4.15      5.58      3.21
   SRCPARAM L0002044          0.0      4.15      5.58      3.21
   SRCPARAM L0002045          0.0      4.15      5.58      3.21
   SRCPARAM L0002046          0.0      4.15      5.58      3.21
   SRCPARAM L0002047          0.0      4.15      5.58      3.21
   SRCPARAM L0002048          0.0      4.15      5.58      3.21
   SRCPARAM L0002049          0.0      4.15      5.58      3.21
   SRCPARAM L0002050          0.0      4.15      5.58      3.21
   SRCPARAM L0002051          0.0      4.15      5.58      3.21
   SRCPARAM L0002052          0.0      4.15      5.58      3.21
   SRCPARAM L0002053          0.0      4.15      5.58      3.21
   SRCPARAM L0002054          0.0      4.15      5.58      3.21
   SRCPARAM L0002055          0.0      4.15      5.58      3.21
   SRCPARAM L0002056          0.0      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
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   SRCPARAM L0002152     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002153     0.0000561277      0.60      5.58      3.21
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   SRCPARAM L0002155     0.0000561277      0.60      5.58      3.21
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   SRCPARAM L0002156     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002157     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002158     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002159     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002160     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002161     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002162     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002163     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002164     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002165     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002166     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002167     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002168     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002169     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002170     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002171     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002172     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002173     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002174     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002175     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002176     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002177     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002178     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002179     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002180     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002181     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002182     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002183     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002184     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002185     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002186     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002187     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002188     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002189     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002190     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002191     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002192     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002193     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002194     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002195     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002196     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002197     0.0000561277      0.60       5.58       3.21
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0002198     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002199     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002200     0.0000561277      0.60       5.58       3.21
   SRCPARAM L0002201     0.0000561277      0.60       5.58       3.21
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   SRCPARAM L0002202     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002203     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002204     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002205     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002206     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002207     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002208     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002209     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002210     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002211     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002212     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002213     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002214     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002215     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002216     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002217     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002218     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002219     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002220     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002221     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002222     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002223     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002224     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002225     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002226     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002227     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002228     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002229     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002230     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002231     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002232     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002233     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002234     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002235     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002236     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002237     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002238     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002239     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002240     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002241     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002242     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002243     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002244     0.0000561277      0.60      5.58      3.21
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   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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RE STARTING
   INCLUDED Westport_StevensCrk_TOG.rou
RE FINISHED
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** AERMOD Meteorology Pathway
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ME STARTING
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   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
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** AERMOD Output Pathway
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   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
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   PLOTFILE 24 ALL 1ST WESTPORT_STEVENSCRK_TOG.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_STEVENSCRK_TOG.AD\AN00GALL.PLT 33
   SUMMFILE Westport_StevensCrk_TOG.sum
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 8/18/2018
** File:
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_TOG\Westport_StevensCrk_TOG.ADI
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** AERMOD Control Pathway
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CO STARTING
   TITLEONE C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 1918000
   POLLUTID TOG
   RUNORNOT RUN
   ERRORFIL Westport_StevensCrk_TOG.err
CO FINISHED
**
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** AERMOD Source Pathway
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**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC SR-85 NB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.30
** SZINIT = 2.93
** Nodes = 7
** 584318.073, 4130698.556, 91.70, 4.15, 5.58
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** 584214.591, 4130961.572, 89.16, 4.15, 5.58
** 584178.660, 4131112.482, 87.07, 4.15, 5.58
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** 584082.365, 4131549.404, 90.95, 4.15, 5.58
** 584032.062, 4131678.755, 92.34, 4.15, 5.58
** 583991.819, 4131739.119, 92.39, 4.15, 5.58
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   LOCATION L0001877     VOLUME   584311.482 4130715.307 91.98
   LOCATION L0001878     VOLUME   584307.089 4130726.473 91.54
   LOCATION L0001879     VOLUME   584302.695 4130737.640 91.43
   LOCATION L0001880     VOLUME   584298.302 4130748.807 91.36
   LOCATION L0001881     VOLUME   584293.908 4130759.974 91.88
   LOCATION L0001882     VOLUME   584289.515 4130771.140 91.93
   LOCATION L0001883     VOLUME   584285.121 4130782.307 91.40
   LOCATION L0001884     VOLUME   584280.728 4130793.474 91.00
   LOCATION L0001885     VOLUME   584276.334 4130804.641 90.90
   LOCATION L0001886     VOLUME   584271.941 4130815.808 90.81
   LOCATION L0001887     VOLUME   584267.547 4130826.974 90.70
   LOCATION L0001888     VOLUME   584263.154 4130838.141 90.59
   LOCATION L0001889     VOLUME   584258.761 4130849.308 90.48
   LOCATION L0001890     VOLUME   584254.367 4130860.475 90.34
   LOCATION L0001891     VOLUME   584249.974 4130871.642 90.21
   LOCATION L0001892     VOLUME   584245.580 4130882.808 90.17
   LOCATION L0001893     VOLUME   584241.187 4130893.975 90.08
   LOCATION L0001894     VOLUME   584236.793 4130905.142 89.90
   LOCATION L0001895     VOLUME   584232.400 4130916.309 89.65
   LOCATION L0001896     VOLUME   584228.006 4130927.476 89.49
   LOCATION L0001897     VOLUME   584223.613 4130938.642 89.37
   LOCATION L0001898     VOLUME   584219.219 4130949.809 89.29
   LOCATION L0001899     VOLUME   584214.826 4130960.976 89.16
   LOCATION L0001900     VOLUME   584211.960 4130972.623 89.04
   LOCATION L0001901     VOLUME   584209.181 4130984.296 88.75
   LOCATION L0001902     VOLUME   584206.401 4130995.970 88.38
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   LOCATION L0001905     VOLUME   584198.063 4131030.991 87.78
   LOCATION L0001906     VOLUME   584195.283 4131042.665 87.63
   LOCATION L0001907     VOLUME   584192.504 4131054.338 87.48
   LOCATION L0001908     VOLUME   584189.724 4131066.012 87.51
   LOCATION L0001909     VOLUME   584186.945 4131077.686 87.46
   LOCATION L0001910     VOLUME   584184.166 4131089.359 87.27
   LOCATION L0001911     VOLUME   584181.386 4131101.033 87.01
   LOCATION L0001912     VOLUME   584178.616 4131112.709 86.90
   LOCATION L0001913     VOLUME   584176.328 4131124.489 86.82
   LOCATION L0001914     VOLUME   584174.040 4131136.269 86.76
   LOCATION L0001915     VOLUME   584171.753 4131148.048 86.71
   LOCATION L0001916     VOLUME   584169.465 4131159.828 86.73
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LOCATION L0001917     VOLUME   584167.177 4131171.608 86.78
LOCATION L0001918     VOLUME   584164.889 4131183.388 86.89
LOCATION L0001919     VOLUME   584162.601 4131195.168 87.07
LOCATION L0001920     VOLUME   584160.314 4131206.948 87.20
LOCATION L0001921     VOLUME   584158.026 4131218.728 87.26
LOCATION L0001922     VOLUME   584155.738 4131230.508 87.26
LOCATION L0001923     VOLUME   584153.450 4131242.288 87.31
LOCATION L0001924     VOLUME   584151.162 4131254.067 87.39
LOCATION L0001925     VOLUME   584148.874 4131265.847 87.49
LOCATION L0001926     VOLUME   584146.587 4131277.627 87.61
LOCATION L0001927     VOLUME   584144.299 4131289.407 87.75
LOCATION L0001928     VOLUME   584142.011 4131301.187 87.91
LOCATION L0001929     VOLUME   584139.723 4131312.967 88.13
LOCATION L0001930     VOLUME   584137.435 4131324.747 88.36
LOCATION L0001931     VOLUME   584135.147 4131336.527 88.59
LOCATION L0001932     VOLUME   584132.860 4131348.307 88.71
LOCATION L0001933     VOLUME   584130.572 4131360.086 88.78
LOCATION L0001934     VOLUME   584128.284 4131371.866 88.89
LOCATION L0001935     VOLUME   584125.996 4131383.646 89.05
LOCATION L0001936     VOLUME   584123.708 4131395.426 89.20
LOCATION L0001937     VOLUME   584121.420 4131407.206 89.43
LOCATION L0001938     VOLUME   584119.133 4131418.986 89.62
LOCATION L0001939     VOLUME   584116.845 4131430.766 89.79
LOCATION L0001940     VOLUME   584114.557 4131442.546 89.95
LOCATION L0001941     VOLUME   584112.269 4131454.326 90.11
LOCATION L0001942     VOLUME   584109.293 4131465.928 90.22
LOCATION L0001943     VOLUME   584105.608 4131477.349 90.30
LOCATION L0001944     VOLUME   584101.924 4131488.769 90.39
LOCATION L0001945     VOLUME   584098.240 4131500.190 90.51
LOCATION L0001946     VOLUME   584094.556 4131511.610 90.63
LOCATION L0001947     VOLUME   584090.872 4131523.031 90.74
LOCATION L0001948     VOLUME   584087.188 4131534.451 90.87
LOCATION L0001949     VOLUME   584083.504 4131545.872 91.02
LOCATION L0001950     VOLUME   584079.361 4131557.129 91.15
LOCATION L0001951     VOLUME   584075.011 4131568.313 91.26
LOCATION L0001952     VOLUME   584070.662 4131579.497 91.38
LOCATION L0001953     VOLUME   584066.313 4131590.681 91.51
LOCATION L0001954     VOLUME   584061.963 4131601.865 91.67
LOCATION L0001955     VOLUME   584057.614 4131613.049 91.85
LOCATION L0001956     VOLUME   584053.265 4131624.233 91.95
LOCATION L0001957     VOLUME   584048.915 4131635.417 92.02
LOCATION L0001958     VOLUME   584044.566 4131646.601 92.13
LOCATION L0001959     VOLUME   584040.216 4131657.785 92.25
LOCATION L0001960     VOLUME   584035.867 4131668.969 92.38
LOCATION L0001961     VOLUME   584031.229 4131680.004 92.43
LOCATION L0001962     VOLUME   584024.573 4131689.988 92.52
LOCATION L0001963     VOLUME   584017.917 4131699.973 92.55
LOCATION L0001964     VOLUME   584011.260 4131709.957 92.56
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   LOCATION L0001966     VOLUME   583997.947 4131729.927 92.61
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC SR-85 SB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.0
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 8
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** 584066.495, 4131537.518, 90.53, 4.15, 5.58
** 584109.020, 4131380.177, 89.08, 4.15, 5.58
** 584141.622, 4131210.079, 87.10, 4.15, 5.58
** 584177.059, 4131039.980, 88.48, 4.15, 5.58
** 584223.836, 4130878.386, 90.99, 4.15, 5.58
** 584293.293, 4130702.618, 92.07, 4.15, 5.58
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   LOCATION L0001967     VOLUME   583976.332 4131725.347 91.92
   LOCATION L0001968     VOLUME   583983.115 4131715.448 91.94
   LOCATION L0001969     VOLUME   583989.898 4131705.549 91.93
   LOCATION L0001970     VOLUME   583996.680 4131695.650 91.95
   LOCATION L0001971     VOLUME   584003.463 4131685.751 91.74
   LOCATION L0001972     VOLUME   584010.246 4131675.851 91.69
   LOCATION L0001973     VOLUME   584017.029 4131665.952 91.86
   LOCATION L0001974     VOLUME   584023.811 4131656.053 91.88
   LOCATION L0001975     VOLUME   584028.459 4131645.068 91.60
   LOCATION L0001976     VOLUME   584032.460 4131633.755 91.42
   LOCATION L0001977     VOLUME   584036.461 4131622.442 91.29
   LOCATION L0001978     VOLUME   584040.462 4131611.128 91.18
   LOCATION L0001979     VOLUME   584044.463 4131599.815 91.24
   LOCATION L0001980     VOLUME   584048.464 4131588.502 91.12
   LOCATION L0001981     VOLUME   584052.465 4131577.188 90.83
   LOCATION L0001982     VOLUME   584056.466 4131565.875 90.57
   LOCATION L0001983     VOLUME   584060.467 4131554.562 90.43
   LOCATION L0001984     VOLUME   584064.468 4131543.248 90.31
   LOCATION L0001985     VOLUME   584068.040 4131531.801 90.16
   LOCATION L0001986     VOLUME   584071.171 4131520.217 89.98
   LOCATION L0001987     VOLUME   584074.302 4131508.632 90.22
   LOCATION L0001988     VOLUME   584077.433 4131497.048 90.03
   LOCATION L0001989     VOLUME   584080.564 4131485.464 89.53
   LOCATION L0001990     VOLUME   584083.695 4131473.879 89.42
   LOCATION L0001991     VOLUME   584086.826 4131462.295 89.31
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LOCATION L0001992     VOLUME   584089.956 4131450.711 89.21
LOCATION L0001993     VOLUME   584093.087 4131439.126 89.11
LOCATION L0001994     VOLUME   584096.218 4131427.542 89.02
LOCATION L0001995     VOLUME   584099.349 4131415.958 89.17
LOCATION L0001996     VOLUME   584102.480 4131404.373 89.16
LOCATION L0001997     VOLUME   584105.611 4131392.789 88.97
LOCATION L0001998     VOLUME   584108.742 4131381.204 88.86
LOCATION L0001999     VOLUME   584111.078 4131369.437 88.73
LOCATION L0002000     VOLUME   584113.337 4131357.651 88.64
LOCATION L0002001     VOLUME   584115.596 4131345.866 88.59
LOCATION L0002002     VOLUME   584117.855 4131334.080 88.54
LOCATION L0002003     VOLUME   584120.114 4131322.295 88.45
LOCATION L0002004     VOLUME   584122.373 4131310.509 88.32
LOCATION L0002005     VOLUME   584124.631 4131298.724 88.17
LOCATION L0002006     VOLUME   584126.890 4131286.938 88.01
LOCATION L0002007     VOLUME   584129.149 4131275.153 87.79
LOCATION L0002008     VOLUME   584131.408 4131263.368 87.53
LOCATION L0002009     VOLUME   584133.667 4131251.582 87.37
LOCATION L0002010     VOLUME   584135.926 4131239.797 87.24
LOCATION L0002011     VOLUME   584138.185 4131228.011 87.18
LOCATION L0002012     VOLUME   584140.444 4131216.226 87.12
LOCATION L0002013     VOLUME   584142.793 4131204.458 87.35
LOCATION L0002014     VOLUME   584145.240 4131192.710 87.68
LOCATION L0002015     VOLUME   584147.688 4131180.963 87.82
LOCATION L0002016     VOLUME   584150.135 4131169.215 87.77
LOCATION L0002017     VOLUME   584152.583 4131157.467 87.57
LOCATION L0002018     VOLUME   584155.030 4131145.719 87.23
LOCATION L0002019     VOLUME   584157.477 4131133.972 86.91
LOCATION L0002020     VOLUME   584159.925 4131122.224 86.95
LOCATION L0002021     VOLUME   584162.372 4131110.476 87.05
LOCATION L0002022     VOLUME   584164.820 4131098.728 87.17
LOCATION L0002023     VOLUME   584167.267 4131086.981 87.32
LOCATION L0002024     VOLUME   584169.715 4131075.233 87.80
LOCATION L0002025     VOLUME   584172.162 4131063.485 88.16
LOCATION L0002026     VOLUME   584174.610 4131051.737 88.38
LOCATION L0002027     VOLUME   584177.057 4131039.989 88.47
LOCATION L0002028     VOLUME   584180.393 4131028.463 88.36
LOCATION L0002029     VOLUME   584183.730 4131016.936 88.28
LOCATION L0002030     VOLUME   584187.066 4131005.409 88.46
LOCATION L0002031     VOLUME   584190.403 4130993.882 88.67
LOCATION L0002032     VOLUME   584193.740 4130982.355 88.92
LOCATION L0002033     VOLUME   584197.076 4130970.829 89.17
LOCATION L0002034     VOLUME   584200.413 4130959.302 89.43
LOCATION L0002035     VOLUME   584203.750 4130947.775 89.63
LOCATION L0002036     VOLUME   584207.087 4130936.248 89.71
LOCATION L0002037     VOLUME   584210.423 4130924.722 89.81
LOCATION L0002038     VOLUME   584213.760 4130913.195 89.97
LOCATION L0002039     VOLUME   584217.097 4130901.668 90.14
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   LOCATION L0002040     VOLUME   584220.433 4130890.141 90.30
   LOCATION L0002041     VOLUME   584223.770 4130878.615 90.46
   LOCATION L0002042     VOLUME   584228.159 4130867.447 90.71
   LOCATION L0002043     VOLUME   584232.569 4130856.287 90.79
   LOCATION L0002044     VOLUME   584236.979 4130845.127 90.84
   LOCATION L0002045     VOLUME   584241.389 4130833.966 90.84
   LOCATION L0002046     VOLUME   584245.799 4130822.806 90.85
   LOCATION L0002047     VOLUME   584250.209 4130811.646 90.94
   LOCATION L0002048     VOLUME   584254.619 4130800.486 91.42
   LOCATION L0002049     VOLUME   584259.030 4130789.325 91.15
   LOCATION L0002050     VOLUME   584263.440 4130778.165 91.19
   LOCATION L0002051     VOLUME   584267.850 4130767.005 91.20
   LOCATION L0002052     VOLUME   584272.260 4130755.845 91.27
   LOCATION L0002053     VOLUME   584276.670 4130744.684 91.66
   LOCATION L0002054     VOLUME   584281.080 4130733.524 91.81
   LOCATION L0002055     VOLUME   584285.490 4130722.364 91.45
   LOCATION L0002056     VOLUME   584289.900 4130711.204 91.52
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Stevens Creek EB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.002638
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584193.951, 4131101.094, 89.23, 0.60, 5.58
** 584356.298, 4131105.625, 91.89, 0.60, 5.58
** 584754.237, 4131112.421, 86.16, 0.60, 5.58
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   LOCATION L0002151     VOLUME   584199.949 4131101.262 89.07
   LOCATION L0002152     VOLUME   584211.944 4131101.597 90.58
   LOCATION L0002153     VOLUME   584223.939 4131101.931 92.23
   LOCATION L0002154     VOLUME   584235.935 4131102.266 93.17
   LOCATION L0002155     VOLUME   584247.930 4131102.601 93.04
   LOCATION L0002156     VOLUME   584259.925 4131102.936 93.02
   LOCATION L0002157     VOLUME   584271.921 4131103.270 93.21
   LOCATION L0002158     VOLUME   584283.916 4131103.605 93.25
   LOCATION L0002159     VOLUME   584295.911 4131103.940 92.96
   LOCATION L0002160     VOLUME   584307.907 4131104.275 92.65
   LOCATION L0002161     VOLUME   584319.902 4131104.609 92.29
   LOCATION L0002162     VOLUME   584331.897 4131104.944 91.99
   LOCATION L0002163     VOLUME   584343.893 4131105.279 91.96
   LOCATION L0002164     VOLUME   584355.888 4131105.614 91.93
   LOCATION L0002165     VOLUME   584367.886 4131105.823 91.93
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   LOCATION L0002166     VOLUME   584379.884 4131106.028 91.90
   LOCATION L0002167     VOLUME   584391.883 4131106.233 91.64
   LOCATION L0002168     VOLUME   584403.881 4131106.438 91.39
   LOCATION L0002169     VOLUME   584415.879 4131106.643 91.28
   LOCATION L0002170     VOLUME   584427.877 4131106.847 91.16
   LOCATION L0002171     VOLUME   584439.876 4131107.052 91.04
   LOCATION L0002172     VOLUME   584451.874 4131107.257 90.91
   LOCATION L0002173     VOLUME   584463.872 4131107.462 90.75
   LOCATION L0002174     VOLUME   584475.870 4131107.667 90.58
   LOCATION L0002175     VOLUME   584487.869 4131107.872 90.20
   LOCATION L0002176     VOLUME   584499.867 4131108.077 89.80
   LOCATION L0002177     VOLUME   584511.865 4131108.282 89.58
   LOCATION L0002178     VOLUME   584523.863 4131108.487 89.39
   LOCATION L0002179     VOLUME   584535.862 4131108.692 89.41
   LOCATION L0002180     VOLUME   584547.860 4131108.897 89.49
   LOCATION L0002181     VOLUME   584559.858 4131109.101 89.40
   LOCATION L0002182     VOLUME   584571.856 4131109.306 89.25
   LOCATION L0002183     VOLUME   584583.855 4131109.511 89.05
   LOCATION L0002184     VOLUME   584595.853 4131109.716 88.82
   LOCATION L0002185     VOLUME   584607.851 4131109.921 88.58
   LOCATION L0002186     VOLUME   584619.849 4131110.126 88.33
   LOCATION L0002187     VOLUME   584631.848 4131110.331 88.12
   LOCATION L0002188     VOLUME   584643.846 4131110.536 87.94
   LOCATION L0002189     VOLUME   584655.844 4131110.741 87.78
   LOCATION L0002190     VOLUME   584667.842 4131110.946 87.66
   LOCATION L0002191     VOLUME   584679.841 4131111.150 87.54
   LOCATION L0002192     VOLUME   584691.839 4131111.355 87.44
   LOCATION L0002193     VOLUME   584703.837 4131111.560 87.28
   LOCATION L0002194     VOLUME   584715.835 4131111.765 87.02
   LOCATION L0002195     VOLUME   584727.834 4131111.970 86.74
   LOCATION L0002196     VOLUME   584739.832 4131112.175 86.41
   LOCATION L0002197     VOLUME   584751.830 4131112.380 86.20
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Stevens Creek WB
** PREFIX
** Length of Side = 12.00
** Configuration = Adjacent
** Emission Rate = 0.002638
** Vertical Dimension = 6.90
** SZINIT = 3.21
** Nodes = 3
** 584755.747, 4131127.523, 86.13, 0.60, 5.58
** 584374.420, 4131122.992, 91.63, 0.60, 5.58
** 584190.176, 4131122.237, 90.97, 0.60, 5.58
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   LOCATION L0002198     VOLUME   584749.747 4131127.452 86.14
   LOCATION L0002199     VOLUME   584737.748 4131127.309 86.33
   LOCATION L0002200     VOLUME   584725.749 4131127.167 86.51
   LOCATION L0002201     VOLUME   584713.750 4131127.024 86.72
   LOCATION L0002202     VOLUME   584701.751 4131126.881 86.94
   LOCATION L0002203     VOLUME   584689.752 4131126.739 87.16
   LOCATION L0002204     VOLUME   584677.753 4131126.596 87.38
   LOCATION L0002205     VOLUME   584665.753 4131126.454 87.56
   LOCATION L0002206     VOLUME   584653.754 4131126.311 87.74
   LOCATION L0002207     VOLUME   584641.755 4131126.169 87.90
   LOCATION L0002208     VOLUME   584629.756 4131126.026 88.05
   LOCATION L0002209     VOLUME   584617.757 4131125.884 88.24
   LOCATION L0002210     VOLUME   584605.758 4131125.741 88.44
   LOCATION L0002211     VOLUME   584593.758 4131125.598 88.64
   LOCATION L0002212     VOLUME   584581.759 4131125.456 88.85
   LOCATION L0002213     VOLUME   584569.760 4131125.313 89.00
   LOCATION L0002214     VOLUME   584557.761 4131125.171 89.08
   LOCATION L0002215     VOLUME   584545.762 4131125.028 89.17
   LOCATION L0002216     VOLUME   584533.763 4131124.886 89.29
   LOCATION L0002217     VOLUME   584521.764 4131124.743 89.43
   LOCATION L0002218     VOLUME   584509.764 4131124.600 89.61
   LOCATION L0002219     VOLUME   584497.765 4131124.458 89.80
   LOCATION L0002220     VOLUME   584485.766 4131124.315 89.98
   LOCATION L0002221     VOLUME   584473.767 4131124.173 90.16
   LOCATION L0002222     VOLUME   584461.768 4131124.030 90.34
   LOCATION L0002223     VOLUME   584449.769 4131123.888 90.53
   LOCATION L0002224     VOLUME   584437.769 4131123.745 90.73
   LOCATION L0002225     VOLUME   584425.770 4131123.602 90.93
   LOCATION L0002226     VOLUME   584413.771 4131123.460 91.06
   LOCATION L0002227     VOLUME   584401.772 4131123.317 91.21
   LOCATION L0002228     VOLUME   584389.773 4131123.175 91.38
   LOCATION L0002229     VOLUME   584377.774 4131123.032 91.55
   LOCATION L0002230     VOLUME   584365.774 4131122.957 91.68
   LOCATION L0002231     VOLUME   584353.774 4131122.908 91.81
   LOCATION L0002232     VOLUME   584341.774 4131122.859 91.97
   LOCATION L0002233     VOLUME   584329.774 4131122.809 92.13
   LOCATION L0002234     VOLUME   584317.774 4131122.760 92.26
   LOCATION L0002235     VOLUME   584305.774 4131122.711 92.40
   LOCATION L0002236     VOLUME   584293.775 4131122.662 92.50
   LOCATION L0002237     VOLUME   584281.775 4131122.613 92.59
   LOCATION L0002238     VOLUME   584269.775 4131122.564 92.75
   LOCATION L0002239     VOLUME   584257.775 4131122.514 92.92
   LOCATION L0002240     VOLUME   584245.775 4131122.465 93.07
   LOCATION L0002241     VOLUME   584233.775 4131122.416 93.22
   LOCATION L0002242     VOLUME   584221.775 4131122.367 92.54
   LOCATION L0002243     VOLUME   584209.775 4131122.318 91.60
   LOCATION L0002244     VOLUME   584197.775 4131122.268 89.75
** End of LINE VOLUME Source ID = SLINE4
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** Source Parameters **
** LINE VOLUME Source ID = SLINE1
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   SRCPARAM L0001877          0.0      4.15      5.58      2.93
   SRCPARAM L0001878          0.0      4.15      5.58      2.93
   SRCPARAM L0001879          0.0      4.15      5.58      2.93
   SRCPARAM L0001880          0.0      4.15      5.58      2.93
   SRCPARAM L0001881          0.0      4.15      5.58      2.93
   SRCPARAM L0001882          0.0      4.15      5.58      2.93
   SRCPARAM L0001883          0.0      4.15      5.58      2.93
   SRCPARAM L0001884          0.0      4.15      5.58      2.93
   SRCPARAM L0001885          0.0      4.15      5.58      2.93
   SRCPARAM L0001886          0.0      4.15      5.58      2.93
   SRCPARAM L0001887          0.0      4.15      5.58      2.93
   SRCPARAM L0001888          0.0      4.15      5.58      2.93
   SRCPARAM L0001889          0.0      4.15      5.58      2.93
   SRCPARAM L0001890          0.0      4.15      5.58      2.93
   SRCPARAM L0001891          0.0      4.15      5.58      2.93
   SRCPARAM L0001892          0.0      4.15      5.58      2.93
   SRCPARAM L0001893          0.0      4.15      5.58      2.93
   SRCPARAM L0001894          0.0      4.15      5.58      2.93
   SRCPARAM L0001895          0.0      4.15      5.58      2.93
   SRCPARAM L0001896          0.0      4.15      5.58      2.93
   SRCPARAM L0001897          0.0      4.15      5.58      2.93
   SRCPARAM L0001898          0.0      4.15      5.58      2.93
   SRCPARAM L0001899          0.0      4.15      5.58      2.93
   SRCPARAM L0001900          0.0      4.15      5.58      2.93
   SRCPARAM L0001901          0.0      4.15      5.58      2.93
   SRCPARAM L0001902          0.0      4.15      5.58      2.93
   SRCPARAM L0001903          0.0      4.15      5.58      2.93
   SRCPARAM L0001904          0.0      4.15      5.58      2.93
   SRCPARAM L0001905          0.0      4.15      5.58      2.93
   SRCPARAM L0001906          0.0      4.15      5.58      2.93
   SRCPARAM L0001907          0.0      4.15      5.58      2.93
   SRCPARAM L0001908          0.0      4.15      5.58      2.93
   SRCPARAM L0001909          0.0      4.15      5.58      2.93
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   SRCPARAM L0001912          0.0      4.15      5.58      2.93
   SRCPARAM L0001913          0.0      4.15      5.58      2.93
   SRCPARAM L0001914          0.0      4.15      5.58      2.93
   SRCPARAM L0001915          0.0      4.15      5.58      2.93
   SRCPARAM L0001916          0.0      4.15      5.58      2.93
   SRCPARAM L0001917          0.0      4.15      5.58      2.93
   SRCPARAM L0001918          0.0      4.15      5.58      2.93
   SRCPARAM L0001919          0.0      4.15      5.58      2.93
   SRCPARAM L0001920          0.0      4.15      5.58      2.93
   SRCPARAM L0001921          0.0      4.15      5.58      2.93
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   SRCPARAM L0001922            0.0      4.15      5.58      2.93
   SRCPARAM L0001923            0.0      4.15      5.58      2.93
   SRCPARAM L0001924            0.0      4.15      5.58      2.93
   SRCPARAM L0001925            0.0      4.15      5.58      2.93
   SRCPARAM L0001926            0.0      4.15      5.58      2.93
   SRCPARAM L0001927            0.0      4.15      5.58      2.93
   SRCPARAM L0001928            0.0      4.15      5.58      2.93
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   SRCPARAM L0001931            0.0      4.15      5.58      2.93
   SRCPARAM L0001932            0.0      4.15      5.58      2.93
   SRCPARAM L0001933            0.0      4.15      5.58      2.93
   SRCPARAM L0001934            0.0      4.15      5.58      2.93
   SRCPARAM L0001935            0.0      4.15      5.58      2.93
   SRCPARAM L0001936            0.0      4.15      5.58      2.93
   SRCPARAM L0001937            0.0      4.15      5.58      2.93
   SRCPARAM L0001938            0.0      4.15      5.58      2.93
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   SRCPARAM L0001940            0.0      4.15      5.58      2.93
   SRCPARAM L0001941            0.0      4.15      5.58      2.93
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   SRCPARAM L0001944            0.0      4.15      5.58      2.93
   SRCPARAM L0001945            0.0      4.15      5.58      2.93
   SRCPARAM L0001946            0.0      4.15      5.58      2.93
   SRCPARAM L0001947            0.0      4.15      5.58      2.93
   SRCPARAM L0001948            0.0      4.15      5.58      2.93
   SRCPARAM L0001949            0.0      4.15      5.58      2.93
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   SRCPARAM L0001951            0.0      4.15      5.58      2.93
   SRCPARAM L0001952            0.0      4.15      5.58      2.93
   SRCPARAM L0001953            0.0      4.15      5.58      2.93
   SRCPARAM L0001954            0.0      4.15      5.58      2.93
   SRCPARAM L0001955            0.0      4.15      5.58      2.93
   SRCPARAM L0001956            0.0      4.15      5.58      2.93
   SRCPARAM L0001957            0.0      4.15      5.58      2.93
   SRCPARAM L0001958            0.0      4.15      5.58      2.93
   SRCPARAM L0001959            0.0      4.15      5.58      2.93
   SRCPARAM L0001960            0.0      4.15      5.58      2.93
   SRCPARAM L0001961            0.0      4.15      5.58      2.93
   SRCPARAM L0001962            0.0      4.15      5.58      2.93
   SRCPARAM L0001963            0.0      4.15      5.58      2.93
   SRCPARAM L0001964            0.0      4.15      5.58      2.93
   SRCPARAM L0001965            0.0      4.15      5.58      2.93
   SRCPARAM L0001966            0.0      4.15      5.58      2.93
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** LINE VOLUME Source ID = SLINE2
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SRCPARAM L0001970          0.0       4.15       5.58       3.21
SRCPARAM L0001971          0.0       4.15       5.58       3.21
SRCPARAM L0001972          0.0       4.15       5.58       3.21
SRCPARAM L0001973          0.0       4.15       5.58       3.21
SRCPARAM L0001974          0.0       4.15       5.58       3.21
SRCPARAM L0001975          0.0       4.15       5.58       3.21
SRCPARAM L0001976          0.0       4.15       5.58       3.21
SRCPARAM L0001977          0.0       4.15       5.58       3.21
SRCPARAM L0001978          0.0       4.15       5.58       3.21
SRCPARAM L0001979          0.0       4.15       5.58       3.21
SRCPARAM L0001980          0.0       4.15       5.58       3.21
SRCPARAM L0001981          0.0       4.15       5.58       3.21
SRCPARAM L0001982          0.0       4.15       5.58       3.21
SRCPARAM L0001983          0.0       4.15       5.58       3.21
SRCPARAM L0001984          0.0       4.15       5.58       3.21
SRCPARAM L0001985          0.0       4.15       5.58       3.21
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SRCPARAM L0001990          0.0       4.15       5.58       3.21
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SRCPARAM L0001992          0.0       4.15       5.58       3.21
SRCPARAM L0001993          0.0       4.15       5.58       3.21
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SRCPARAM L0001995          0.0       4.15       5.58       3.21
SRCPARAM L0001996          0.0       4.15       5.58       3.21
SRCPARAM L0001997          0.0       4.15       5.58       3.21
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SRCPARAM L0001999          0.0       4.15       5.58       3.21
SRCPARAM L0002000          0.0       4.15       5.58       3.21
SRCPARAM L0002001          0.0       4.15       5.58       3.21
SRCPARAM L0002002          0.0       4.15       5.58       3.21
SRCPARAM L0002003          0.0       4.15       5.58       3.21
SRCPARAM L0002004          0.0       4.15       5.58       3.21
SRCPARAM L0002005          0.0       4.15       5.58       3.21
SRCPARAM L0002006          0.0       4.15       5.58       3.21
SRCPARAM L0002007          0.0       4.15       5.58       3.21
SRCPARAM L0002008          0.0       4.15       5.58       3.21
SRCPARAM L0002009          0.0       4.15       5.58       3.21
SRCPARAM L0002010          0.0       4.15       5.58       3.21
SRCPARAM L0002011          0.0       4.15       5.58       3.21
SRCPARAM L0002012          0.0       4.15       5.58       3.21
SRCPARAM L0002013          0.0       4.15       5.58       3.21
SRCPARAM L0002014          0.0       4.15       5.58       3.21
SRCPARAM L0002015          0.0       4.15       5.58       3.21
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   SRCPARAM L0002020          0.0      4.15      5.58      3.21
   SRCPARAM L0002021          0.0      4.15      5.58      3.21
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   SRCPARAM L0002023          0.0      4.15      5.58      3.21
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   SRCPARAM L0002046          0.0      4.15      5.58      3.21
   SRCPARAM L0002047          0.0      4.15      5.58      3.21
   SRCPARAM L0002048          0.0      4.15      5.58      3.21
   SRCPARAM L0002049          0.0      4.15      5.58      3.21
   SRCPARAM L0002050          0.0      4.15      5.58      3.21
   SRCPARAM L0002051          0.0      4.15      5.58      3.21
   SRCPARAM L0002052          0.0      4.15      5.58      3.21
   SRCPARAM L0002053          0.0      4.15      5.58      3.21
   SRCPARAM L0002054          0.0      4.15      5.58      3.21
   SRCPARAM L0002055          0.0      4.15      5.58      3.21
   SRCPARAM L0002056          0.0      4.15      5.58      3.21
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** LINE VOLUME Source ID = SLINE3
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   SRCPARAM L0002152     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002153     0.0000561277      0.60      5.58      3.21
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   SRCPARAM L0002156     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002157     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002158     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002159     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002160     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002161     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002162     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002163     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002164     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002165     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002166     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002167     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002168     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002169     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002170     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002171     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002172     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002173     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002174     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002175     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002176     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002177     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002178     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002179     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002180     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002181     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002182     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002183     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002184     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002185     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002186     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002187     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002188     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002189     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002190     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002191     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002192     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002193     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002194     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002195     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002196     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002197     0.0000561277      0.60      5.58      3.21
** ------------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0002198     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002199     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002200     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002201     0.0000561277      0.60      5.58      3.21
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   SRCPARAM L0002202     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002203     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002204     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002205     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002206     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002207     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002208     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002209     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002210     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002211     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002212     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002213     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002214     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002215     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002216     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002217     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002218     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002219     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002220     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002221     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002222     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002223     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002224     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002225     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002226     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002227     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002228     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002229     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002230     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002231     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002232     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002233     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002234     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002235     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002236     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002237     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002238     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002239     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002240     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002241     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002242     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002243     0.0000561277      0.60      5.58      3.21
   SRCPARAM L0002244     0.0000561277      0.60      5.58      3.21
** ------------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
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****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED Westport_StevensCrk_TOG.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "Met Data\745090.SFC"
   PROFFILE "Met Data\745090.PFL"
   SURFDATA 23244 2009
   UAIRDATA 23230 2009 OAKLAND/WSO_AP
   PROFBASE 11.9 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WESTPORT_STEVENSCRK_TOG.AD\01H1GALL.PLT 31
   PLOTFILE 24 ALL 1ST WESTPORT_STEVENSCRK_TOG.AD\24H1GALL.PLT 32
   PLOTFILE ANNUAL ALL WESTPORT_STEVENSCRK_TOG.AD\AN00GALL.PLT 33
   SUMMFILE Westport_StevensCrk_TOG.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of         181 Warning Message(s)
 A Total of           0 Informational Message(s)
```

```
   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     386         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     387         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     388         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     389         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     390         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     391         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     392         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     393         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     394         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     395         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     396         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     397         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     398         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     399         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     400         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     401         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     402         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     403         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     404         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     405         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     406         VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
SO W320     407         VPARM: Input Parameter May Be Out-of-Range for Parameter
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        QS
SO W320     408         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     409         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     410         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     411         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     412         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     413         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     414         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     415         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     416         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     417         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     418         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     419         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     420         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     421         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     422         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     423         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     424         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     425         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     426         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     427         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     428         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     429         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     430         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     431         VPARM: Input Parameter May Be Out-of-Range for Parameter
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          QS
SO W320      432        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      433        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      434        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      435        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      436        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      437        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      438        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      439        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      440        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      441        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      442        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      443        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      444        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      445        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      446        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      447        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      448        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      449        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      450        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      451        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      452        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      453        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      454        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      455        VPARM: Input Parameter May Be Out-of-Range for Parameter
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       QS
SO W320     456        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     457        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     458        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     459        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     460        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     461        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     462        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     463        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     464        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     465        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     466        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     468        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     469        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     470        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     471        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     472        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     473        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     474        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     475        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     476        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     479        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     480        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     481        VPARM: Input Parameter May Be Out-of-Range for Parameter
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        QS
SO W320      482         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      483         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      484         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      485         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      486         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      488         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      489         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      500         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      501         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      502         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      503         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      504         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      505         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     506        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     507        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     508        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     510        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     511        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     512        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     513        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     514        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     515        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     516        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     521        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     522        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     523        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     524        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     525        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     526        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     527        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     528        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     529        VPARM: Input Parameter May Be Out-of-Range for Parameter
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        QS
SO W320      530        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      531        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
SO W320      532        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      533        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      534        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      535        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      536        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      537        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      538        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      539        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      540        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      541        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      542        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      543        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      544        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      545        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      546        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      547        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      548        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      549        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      550        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      551        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      552        VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320      553        VPARM: Input Parameter May Be Out-of-Range for Parameter
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        QS
 SO W320     554        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     555        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     556        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     557        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     558        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     559        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     560        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     561        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     562        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     563        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     564        VPARM: Input Parameter May Be Out-of-Range for Parameter
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 SO W320     565        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     566        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     567        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS
 SO W320     568        VPARM: Input Parameter May Be Out-of-Range for Parameter
        QS

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                          ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   275 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   1918000.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  TOG

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:    275 Source(s);       1 Source Group(s); and     101
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    275 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  14134
```

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 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE 
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE 
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE 
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing 
Hours
                                                                 b for Both Calm 
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    11.90 ;  Decay 
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                               ; 
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Westport_StevensCrk_TOG.err

 **File for Summary of Results:   Westport_StevensCrk_TOG.sum

♀ *** AERMOD - VERSION  18081 ***   *** 
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***    
08/18/18
 *** AERMET - VERSION  14134 ***   ***                                          
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                      BASE    RELEASE    INIT.  
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
```

```
SZ     SOURCE   SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - 

 L0001876         0   0.00000E+00  584315.9 4130704.1    92.2     4.15     5.58
2.93     YES
 L0001877         0   0.00000E+00  584311.5 4130715.3    92.0     4.15     5.58
2.93     YES
 L0001878         0   0.00000E+00  584307.1 4130726.5    91.5     4.15     5.58
2.93     YES
 L0001879         0   0.00000E+00  584302.7 4130737.6    91.4     4.15     5.58
2.93     YES
 L0001880         0   0.00000E+00  584298.3 4130748.8    91.4     4.15     5.58
2.93     YES
 L0001881         0   0.00000E+00  584293.9 4130760.0    91.9     4.15     5.58
2.93     YES
 L0001882         0   0.00000E+00  584289.5 4130771.1    91.9     4.15     5.58
2.93     YES
 L0001883         0   0.00000E+00  584285.1 4130782.3    91.4     4.15     5.58
2.93     YES
 L0001884         0   0.00000E+00  584280.7 4130793.5    91.0     4.15     5.58
2.93     YES
 L0001885         0   0.00000E+00  584276.3 4130804.6    90.9     4.15     5.58
2.93     YES
 L0001886         0   0.00000E+00  584271.9 4130815.8    90.8     4.15     5.58
2.93     YES
 L0001887         0   0.00000E+00  584267.5 4130827.0    90.7     4.15     5.58
2.93     YES
 L0001888         0   0.00000E+00  584263.2 4130838.1    90.6     4.15     5.58
2.93     YES
 L0001889         0   0.00000E+00  584258.8 4130849.3    90.5     4.15     5.58
2.93     YES
 L0001890         0   0.00000E+00  584254.4 4130860.5    90.3     4.15     5.58
2.93     YES
 L0001891         0   0.00000E+00  584250.0 4130871.6    90.2     4.15     5.58
2.93     YES
 L0001892         0   0.00000E+00  584245.6 4130882.8    90.2     4.15     5.58
2.93     YES
 L0001893         0   0.00000E+00  584241.2 4130894.0    90.1     4.15     5.58
2.93     YES
 L0001894         0   0.00000E+00  584236.8 4130905.1    89.9     4.15     5.58
2.93     YES
 L0001895         0   0.00000E+00  584232.4 4130916.3    89.6     4.15     5.58
2.93     YES
 L0001896         0   0.00000E+00  584228.0 4130927.5    89.5     4.15     5.58
2.93     YES
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 L0001897         0   0.00000E+00  584223.6 4130938.6    89.4     4.15     5.58
2.93     YES
 L0001898         0   0.00000E+00  584219.2 4130949.8    89.3     4.15     5.58
2.93     YES
 L0001899         0   0.00000E+00  584214.8 4130961.0    89.2     4.15     5.58
2.93     YES
 L0001900         0   0.00000E+00  584212.0 4130972.6    89.0     4.15     5.58
2.93     YES
 L0001901         0   0.00000E+00  584209.2 4130984.3    88.8     4.15     5.58
2.93     YES
 L0001902         0   0.00000E+00  584206.4 4130996.0    88.4     4.15     5.58
2.93     YES
 L0001903         0   0.00000E+00  584203.6 4131007.6    88.2     4.15     5.58
2.93     YES
 L0001904         0   0.00000E+00  584200.8 4131019.3    88.0     4.15     5.58
2.93     YES
 L0001905         0   0.00000E+00  584198.1 4131031.0    87.8     4.15     5.58
2.93     YES
 L0001906         0   0.00000E+00  584195.3 4131042.7    87.6     4.15     5.58
2.93     YES
 L0001907         0   0.00000E+00  584192.5 4131054.3    87.5     4.15     5.58
2.93     YES
 L0001908         0   0.00000E+00  584189.7 4131066.0    87.5     4.15     5.58
2.93     YES
 L0001909         0   0.00000E+00  584186.9 4131077.7    87.5     4.15     5.58
2.93     YES
 L0001910         0   0.00000E+00  584184.2 4131089.4    87.3     4.15     5.58
2.93     YES
 L0001911         0   0.00000E+00  584181.4 4131101.0    87.0     4.15     5.58
2.93     YES
 L0001912         0   0.00000E+00  584178.6 4131112.7    86.9     4.15     5.58
2.93     YES
 L0001913         0   0.00000E+00  584176.3 4131124.5    86.8     4.15     5.58
2.93     YES
 L0001914         0   0.00000E+00  584174.0 4131136.3    86.8     4.15     5.58
2.93     YES
 L0001915         0   0.00000E+00  584171.8 4131148.0    86.7     4.15     5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

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                                            *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0001916         0   0.00000E+00  584169.5 4131159.8    86.7     4.15     5.58
2.93     YES
 L0001917         0   0.00000E+00  584167.2 4131171.6    86.8     4.15     5.58
2.93     YES
 L0001918         0   0.00000E+00  584164.9 4131183.4    86.9     4.15     5.58
2.93     YES
 L0001919         0   0.00000E+00  584162.6 4131195.2    87.1     4.15     5.58
2.93     YES
 L0001920         0   0.00000E+00  584160.3 4131206.9    87.2     4.15     5.58
2.93     YES
 L0001921         0   0.00000E+00  584158.0 4131218.7    87.3     4.15     5.58
2.93     YES
 L0001922         0   0.00000E+00  584155.7 4131230.5    87.3     4.15     5.58
2.93     YES
 L0001923         0   0.00000E+00  584153.5 4131242.3    87.3     4.15     5.58
2.93     YES
 L0001924         0   0.00000E+00  584151.2 4131254.1    87.4     4.15     5.58
2.93     YES
 L0001925         0   0.00000E+00  584148.9 4131265.8    87.5     4.15     5.58
2.93     YES
 L0001926         0   0.00000E+00  584146.6 4131277.6    87.6     4.15     5.58
2.93     YES
 L0001927         0   0.00000E+00  584144.3 4131289.4    87.8     4.15     5.58
2.93     YES
 L0001928         0   0.00000E+00  584142.0 4131301.2    87.9     4.15     5.58
2.93     YES
 L0001929         0   0.00000E+00  584139.7 4131313.0    88.1     4.15     5.58
2.93     YES
 L0001930         0   0.00000E+00  584137.4 4131324.7    88.4     4.15     5.58
2.93     YES
 L0001931         0   0.00000E+00  584135.1 4131336.5    88.6     4.15     5.58
2.93     YES
 L0001932         0   0.00000E+00  584132.9 4131348.3    88.7     4.15     5.58
2.93     YES
 L0001933         0   0.00000E+00  584130.6 4131360.1    88.8     4.15     5.58
2.93     YES
 L0001934         0   0.00000E+00  584128.3 4131371.9    88.9     4.15     5.58
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2.93     YES
 L0001935         0   0.00000E+00  584126.0 4131383.6    89.0      4.15      5.58
2.93     YES
 L0001936         0   0.00000E+00  584123.7 4131395.4    89.2      4.15      5.58
2.93     YES
 L0001937         0   0.00000E+00  584121.4 4131407.2    89.4      4.15      5.58
2.93     YES
 L0001938         0   0.00000E+00  584119.1 4131419.0    89.6      4.15      5.58
2.93     YES
 L0001939         0   0.00000E+00  584116.8 4131430.8    89.8      4.15      5.58
2.93     YES
 L0001940         0   0.00000E+00  584114.6 4131442.5    90.0      4.15      5.58
2.93     YES
 L0001941         0   0.00000E+00  584112.3 4131454.3    90.1      4.15      5.58
2.93     YES
 L0001942         0   0.00000E+00  584109.3 4131465.9    90.2      4.15      5.58
2.93     YES
 L0001943         0   0.00000E+00  584105.6 4131477.3    90.3      4.15      5.58
2.93     YES
 L0001944         0   0.00000E+00  584101.9 4131488.8    90.4      4.15      5.58
2.93     YES
 L0001945         0   0.00000E+00  584098.2 4131500.2    90.5      4.15      5.58
2.93     YES
 L0001946         0   0.00000E+00  584094.6 4131511.6    90.6      4.15      5.58
2.93     YES
 L0001947         0   0.00000E+00  584090.9 4131523.0    90.7      4.15      5.58
2.93     YES
 L0001948         0   0.00000E+00  584087.2 4131534.5    90.9      4.15      5.58
2.93     YES
 L0001949         0   0.00000E+00  584083.5 4131545.9    91.0      4.15      5.58
2.93     YES
 L0001950         0   0.00000E+00  584079.4 4131557.1    91.1      4.15      5.58
2.93     YES
 L0001951         0   0.00000E+00  584075.0 4131568.3    91.3      4.15      5.58
2.93     YES
 L0001952         0   0.00000E+00  584070.7 4131579.5    91.4      4.15      5.58
2.93     YES
 L0001953         0   0.00000E+00  584066.3 4131590.7    91.5      4.15      5.58
2.93     YES
 L0001954         0   0.00000E+00  584062.0 4131601.9    91.7      4.15      5.58
2.93     YES
 L0001955         0   0.00000E+00  584057.6 4131613.0    91.8      4.15      5.58
2.93     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                         ***        17:24:30
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                           *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -


 L0001956         0   0.00000E+00  584053.3 4131624.2    92.0     4.15     5.58
2.93     YES
 L0001957         0   0.00000E+00  584048.9 4131635.4    92.0     4.15     5.58
2.93     YES
 L0001958         0   0.00000E+00  584044.6 4131646.6    92.1     4.15     5.58
2.93     YES
 L0001959         0   0.00000E+00  584040.2 4131657.8    92.2     4.15     5.58
2.93     YES
 L0001960         0   0.00000E+00  584035.9 4131669.0    92.4     4.15     5.58
2.93     YES
 L0001961         0   0.00000E+00  584031.2 4131680.0    92.4     4.15     5.58
2.93     YES
 L0001962         0   0.00000E+00  584024.6 4131690.0    92.5     4.15     5.58
2.93     YES
 L0001963         0   0.00000E+00  584017.9 4131700.0    92.5     4.15     5.58
2.93     YES
 L0001964         0   0.00000E+00  584011.3 4131710.0    92.6     4.15     5.58
2.93     YES
 L0001965         0   0.00000E+00  584004.6 4131719.9    92.6     4.15     5.58
2.93     YES
 L0001966         0   0.00000E+00  583997.9 4131729.9    92.6     4.15     5.58
2.93     YES
 L0001967         0   0.00000E+00  583976.3 4131725.3    91.9     4.15     5.58
3.21     YES
 L0001968         0   0.00000E+00  583983.1 4131715.4    91.9     4.15     5.58
3.21     YES
 L0001969         0   0.00000E+00  583989.9 4131705.5    91.9     4.15     5.58
3.21     YES
 L0001970         0   0.00000E+00  583996.7 4131695.6    92.0     4.15     5.58
3.21     YES
 L0001971         0   0.00000E+00  584003.5 4131685.8    91.7     4.15     5.58
3.21     YES
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 L0001972         0   0.00000E+00  584010.2 4131675.9    91.7      4.15      5.58
3.21     YES
 L0001973         0   0.00000E+00  584017.0 4131666.0    91.9      4.15      5.58
3.21     YES
 L0001974         0   0.00000E+00  584023.8 4131656.1    91.9      4.15      5.58
3.21     YES
 L0001975         0   0.00000E+00  584028.5 4131645.1    91.6      4.15      5.58
3.21     YES
 L0001976         0   0.00000E+00  584032.5 4131633.8    91.4      4.15      5.58
3.21     YES
 L0001977         0   0.00000E+00  584036.5 4131622.4    91.3      4.15      5.58
3.21     YES
 L0001978         0   0.00000E+00  584040.5 4131611.1    91.2      4.15      5.58
3.21     YES
 L0001979         0   0.00000E+00  584044.5 4131599.8    91.2      4.15      5.58
3.21     YES
 L0001980         0   0.00000E+00  584048.5 4131588.5    91.1      4.15      5.58
3.21     YES
 L0001981         0   0.00000E+00  584052.5 4131577.2    90.8      4.15      5.58
3.21     YES
 L0001982         0   0.00000E+00  584056.5 4131565.9    90.6      4.15      5.58
3.21     YES
 L0001983         0   0.00000E+00  584060.5 4131554.6    90.4      4.15      5.58
3.21     YES
 L0001984         0   0.00000E+00  584064.5 4131543.2    90.3      4.15      5.58
3.21     YES
 L0001985         0   0.00000E+00  584068.0 4131531.8    90.2      4.15      5.58
3.21     YES
 L0001986         0   0.00000E+00  584071.2 4131520.2    90.0      4.15      5.58
3.21     YES
 L0001987         0   0.00000E+00  584074.3 4131508.6    90.2      4.15      5.58
3.21     YES
 L0001988         0   0.00000E+00  584077.4 4131497.0    90.0      4.15      5.58
3.21     YES
 L0001989         0   0.00000E+00  584080.6 4131485.5    89.5      4.15      5.58
3.21     YES
 L0001990         0   0.00000E+00  584083.7 4131473.9    89.4      4.15      5.58
3.21     YES
 L0001991         0   0.00000E+00  584086.8 4131462.3    89.3      4.15      5.58
3.21     YES
 L0001992         0   0.00000E+00  584090.0 4131450.7    89.2      4.15      5.58
3.21     YES
 L0001993         0   0.00000E+00  584093.1 4131439.1    89.1      4.15      5.58
3.21     YES
 L0001994         0   0.00000E+00  584096.2 4131427.5    89.0      4.15      5.58
3.21     YES
 L0001995         0   0.00000E+00  584099.3 4131416.0    89.2      4.15      5.58
3.21     YES
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♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                          *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0001996         0   0.00000E+00  584102.5 4131404.4    89.2     4.15     5.58
3.21     YES
 L0001997         0   0.00000E+00  584105.6 4131392.8    89.0     4.15     5.58
3.21     YES
 L0001998         0   0.00000E+00  584108.7 4131381.2    88.9     4.15     5.58
3.21     YES
 L0001999         0   0.00000E+00  584111.1 4131369.4    88.7     4.15     5.58
3.21     YES
 L0002000         0   0.00000E+00  584113.3 4131357.7    88.6     4.15     5.58
3.21     YES
 L0002001         0   0.00000E+00  584115.6 4131345.9    88.6     4.15     5.58
3.21     YES
 L0002002         0   0.00000E+00  584117.9 4131334.1    88.5     4.15     5.58
3.21     YES
 L0002003         0   0.00000E+00  584120.1 4131322.3    88.5     4.15     5.58
3.21     YES
 L0002004         0   0.00000E+00  584122.4 4131310.5    88.3     4.15     5.58
3.21     YES
 L0002005         0   0.00000E+00  584124.6 4131298.7    88.2     4.15     5.58
3.21     YES
 L0002006         0   0.00000E+00  584126.9 4131286.9    88.0     4.15     5.58
3.21     YES
 L0002007         0   0.00000E+00  584129.1 4131275.2    87.8     4.15     5.58
3.21     YES
 L0002008         0   0.00000E+00  584131.4 4131263.4    87.5     4.15     5.58
3.21     YES
 L0002009         0   0.00000E+00  584133.7 4131251.6    87.4     4.15     5.58
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3.21     YES
 L0002010         0   0.00000E+00  584135.9 4131239.8    87.2      4.15      5.58
3.21     YES
 L0002011         0   0.00000E+00  584138.2 4131228.0    87.2      4.15      5.58
3.21     YES
 L0002012         0   0.00000E+00  584140.4 4131216.2    87.1      4.15      5.58
3.21     YES
 L0002013         0   0.00000E+00  584142.8 4131204.5    87.3      4.15      5.58
3.21     YES
 L0002014         0   0.00000E+00  584145.2 4131192.7    87.7      4.15      5.58
3.21     YES
 L0002015         0   0.00000E+00  584147.7 4131181.0    87.8      4.15      5.58
3.21     YES
 L0002016         0   0.00000E+00  584150.1 4131169.2    87.8      4.15      5.58
3.21     YES
 L0002017         0   0.00000E+00  584152.6 4131157.5    87.6      4.15      5.58
3.21     YES
 L0002018         0   0.00000E+00  584155.0 4131145.7    87.2      4.15      5.58
3.21     YES
 L0002019         0   0.00000E+00  584157.5 4131134.0    86.9      4.15      5.58
3.21     YES
 L0002020         0   0.00000E+00  584159.9 4131122.2    87.0      4.15      5.58
3.21     YES
 L0002021         0   0.00000E+00  584162.4 4131110.5    87.0      4.15      5.58
3.21     YES
 L0002022         0   0.00000E+00  584164.8 4131098.7    87.2      4.15      5.58
3.21     YES
 L0002023         0   0.00000E+00  584167.3 4131087.0    87.3      4.15      5.58
3.21     YES
 L0002024         0   0.00000E+00  584169.7 4131075.2    87.8      4.15      5.58
3.21     YES
 L0002025         0   0.00000E+00  584172.2 4131063.5    88.2      4.15      5.58
3.21     YES
 L0002026         0   0.00000E+00  584174.6 4131051.7    88.4      4.15      5.58
3.21     YES
 L0002027         0   0.00000E+00  584177.1 4131040.0    88.5      4.15      5.58
3.21     YES
 L0002028         0   0.00000E+00  584180.4 4131028.5    88.4      4.15      5.58
3.21     YES
 L0002029         0   0.00000E+00  584183.7 4131016.9    88.3      4.15      5.58
3.21     YES
 L0002030         0   0.00000E+00  584187.1 4131005.4    88.5      4.15      5.58
3.21     YES
 L0002031         0   0.00000E+00  584190.4 4130993.9    88.7      4.15      5.58
3.21     YES
 L0002032         0   0.00000E+00  584193.7 4130982.4    88.9      4.15      5.58
3.21     YES
 L0002033         0   0.00000E+00  584197.1 4130970.8    89.2      4.15      5.58
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3.21     YES
 L0002034         0   0.00000E+00  584200.4 4130959.3    89.4     4.15     5.58
3.21     YES
 L0002035         0   0.00000E+00  584203.8 4130947.8    89.6     4.15     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                   BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0002036         0   0.00000E+00  584207.1 4130936.2    89.7     4.15     5.58
3.21     YES
 L0002037         0   0.00000E+00  584210.4 4130924.7    89.8     4.15     5.58
3.21     YES
 L0002038         0   0.00000E+00  584213.8 4130913.2    90.0     4.15     5.58
3.21     YES
 L0002039         0   0.00000E+00  584217.1 4130901.7    90.1     4.15     5.58
3.21     YES
 L0002040         0   0.00000E+00  584220.4 4130890.1    90.3     4.15     5.58
3.21     YES
 L0002041         0   0.00000E+00  584223.8 4130878.6    90.5     4.15     5.58
3.21     YES
 L0002042         0   0.00000E+00  584228.2 4130867.4    90.7     4.15     5.58
3.21     YES
 L0002043         0   0.00000E+00  584232.6 4130856.3    90.8     4.15     5.58
3.21     YES
 L0002044         0   0.00000E+00  584237.0 4130845.1    90.8     4.15     5.58
3.21     YES
 L0002045         0   0.00000E+00  584241.4 4130834.0    90.8     4.15     5.58
3.21     YES
 L0002046         0   0.00000E+00  584245.8 4130822.8    90.8     4.15     5.58
3.21     YES
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 L0002047         0   0.00000E+00  584250.2 4130811.6    90.9     4.15     5.58
3.21     YES
 L0002048         0   0.00000E+00  584254.6 4130800.5    91.4     4.15     5.58
3.21     YES
 L0002049         0   0.00000E+00  584259.0 4130789.3    91.1     4.15     5.58
3.21     YES
 L0002050         0   0.00000E+00  584263.4 4130778.2    91.2     4.15     5.58
3.21     YES
 L0002051         0   0.00000E+00  584267.9 4130767.0    91.2     4.15     5.58
3.21     YES
 L0002052         0   0.00000E+00  584272.3 4130755.8    91.3     4.15     5.58
3.21     YES
 L0002053         0   0.00000E+00  584276.7 4130744.7    91.7     4.15     5.58
3.21     YES
 L0002054         0   0.00000E+00  584281.1 4130733.5    91.8     4.15     5.58
3.21     YES
 L0002055         0   0.00000E+00  584285.5 4130722.4    91.5     4.15     5.58
3.21     YES
 L0002056         0   0.00000E+00  584289.9 4130711.2    91.5     4.15     5.58
3.21     YES
 L0002151         0   0.56128E-04  584199.9 4131101.3    89.1     0.60     5.58
3.21     YES
 L0002152         0   0.56128E-04  584211.9 4131101.6    90.6     0.60     5.58
3.21     YES
 L0002153         0   0.56128E-04  584223.9 4131101.9    92.2     0.60     5.58
3.21     YES
 L0002154         0   0.56128E-04  584235.9 4131102.3    93.2     0.60     5.58
3.21     YES
 L0002155         0   0.56128E-04  584247.9 4131102.6    93.0     0.60     5.58
3.21     YES
 L0002156         0   0.56128E-04  584259.9 4131102.9    93.0     0.60     5.58
3.21     YES
 L0002157         0   0.56128E-04  584271.9 4131103.3    93.2     0.60     5.58
3.21     YES
 L0002158         0   0.56128E-04  584283.9 4131103.6    93.2     0.60     5.58
3.21     YES
 L0002159         0   0.56128E-04  584295.9 4131103.9    93.0     0.60     5.58
3.21     YES
 L0002160         0   0.56128E-04  584307.9 4131104.3    92.6     0.60     5.58
3.21     YES
 L0002161         0   0.56128E-04  584319.9 4131104.6    92.3     0.60     5.58
3.21     YES
 L0002162         0   0.56128E-04  584331.9 4131104.9    92.0     0.60     5.58
3.21     YES
 L0002163         0   0.56128E-04  584343.9 4131105.3    92.0     0.60     5.58
3.21     YES
 L0002164         0   0.56128E-04  584355.9 4131105.6    91.9     0.60     5.58
3.21     YES
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 L0002165         0   0.56128E-04  584367.9 4131105.8    91.9     0.60     5.58
3.21     YES
 L0002166         0   0.56128E-04  584379.9 4131106.0    91.9     0.60     5.58
3.21     YES
 L0002167         0   0.56128E-04  584391.9 4131106.2    91.6     0.60     5.58
3.21     YES
 L0002168         0   0.56128E-04  584403.9 4131106.4    91.4     0.60     5.58
3.21     YES
 L0002169         0   0.56128E-04  584415.9 4131106.6    91.3     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                   *** VOLUME SOURCE DATA ***


               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.                (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0002170         0   0.56128E-04  584427.9 4131106.8    91.2     0.60     5.58
3.21     YES
 L0002171         0   0.56128E-04  584439.9 4131107.1    91.0     0.60     5.58
3.21     YES
 L0002172         0   0.56128E-04  584451.9 4131107.3    90.9     0.60     5.58
3.21     YES
 L0002173         0   0.56128E-04  584463.9 4131107.5    90.8     0.60     5.58
3.21     YES
 L0002174         0   0.56128E-04  584475.9 4131107.7    90.6     0.60     5.58
3.21     YES
 L0002175         0   0.56128E-04  584487.9 4131107.9    90.2     0.60     5.58
3.21     YES
 L0002176         0   0.56128E-04  584499.9 4131108.1    89.8     0.60     5.58
3.21     YES
 L0002177         0   0.56128E-04  584511.9 4131108.3    89.6     0.60     5.58
3.21     YES
 L0002178         0   0.56128E-04  584523.9 4131108.5    89.4     0.60     5.58
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3.21     YES
 L0002179         0   0.56128E-04  584535.9 4131108.7    89.4      0.60      5.58
3.21     YES
 L0002180         0   0.56128E-04  584547.9 4131108.9    89.5      0.60      5.58
3.21     YES
 L0002181         0   0.56128E-04  584559.9 4131109.1    89.4      0.60      5.58
3.21     YES
 L0002182         0   0.56128E-04  584571.9 4131109.3    89.2      0.60      5.58
3.21     YES
 L0002183         0   0.56128E-04  584583.9 4131109.5    89.0      0.60      5.58
3.21     YES
 L0002184         0   0.56128E-04  584595.9 4131109.7    88.8      0.60      5.58
3.21     YES
 L0002185         0   0.56128E-04  584607.9 4131109.9    88.6      0.60      5.58
3.21     YES
 L0002186         0   0.56128E-04  584619.8 4131110.1    88.3      0.60      5.58
3.21     YES
 L0002187         0   0.56128E-04  584631.8 4131110.3    88.1      0.60      5.58
3.21     YES
 L0002188         0   0.56128E-04  584643.8 4131110.5    87.9      0.60      5.58
3.21     YES
 L0002189         0   0.56128E-04  584655.8 4131110.7    87.8      0.60      5.58
3.21     YES
 L0002190         0   0.56128E-04  584667.8 4131110.9    87.7      0.60      5.58
3.21     YES
 L0002191         0   0.56128E-04  584679.8 4131111.1    87.5      0.60      5.58
3.21     YES
 L0002192         0   0.56128E-04  584691.8 4131111.4    87.4      0.60      5.58
3.21     YES
 L0002193         0   0.56128E-04  584703.8 4131111.6    87.3      0.60      5.58
3.21     YES
 L0002194         0   0.56128E-04  584715.8 4131111.8    87.0      0.60      5.58
3.21     YES
 L0002195         0   0.56128E-04  584727.8 4131112.0    86.7      0.60      5.58
3.21     YES
 L0002196         0   0.56128E-04  584739.8 4131112.2    86.4      0.60      5.58
3.21     YES
 L0002197         0   0.56128E-04  584751.8 4131112.4    86.2      0.60      5.58
3.21     YES
 L0002198         0   0.56128E-04  584749.7 4131127.5    86.1      0.60      5.58
3.21     YES
 L0002199         0   0.56128E-04  584737.7 4131127.3    86.3      0.60      5.58
3.21     YES
 L0002200         0   0.56128E-04  584725.7 4131127.2    86.5      0.60      5.58
3.21     YES
 L0002201         0   0.56128E-04  584713.8 4131127.0    86.7      0.60      5.58
3.21     YES
 L0002202         0   0.56128E-04  584701.8 4131126.9    86.9      0.60      5.58
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3.21     YES
 L0002203         0   0.56128E-04  584689.8 4131126.7    87.2     0.60     5.58
3.21     YES
 L0002204         0   0.56128E-04  584677.8 4131126.6    87.4     0.60     5.58
3.21     YES
 L0002205         0   0.56128E-04  584665.8 4131126.5    87.6     0.60     5.58
3.21     YES
 L0002206         0   0.56128E-04  584653.8 4131126.3    87.7     0.60     5.58
3.21     YES
 L0002207         0   0.56128E-04  584641.8 4131126.2    87.9     0.60     5.58
3.21     YES
 L0002208         0   0.56128E-04  584629.8 4131126.0    88.0     0.60     5.58
3.21     YES
 L0002209         0   0.56128E-04  584617.8 4131125.9    88.2     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ      SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0002210         0   0.56128E-04  584605.8 4131125.7    88.4     0.60     5.58
3.21     YES
 L0002211         0   0.56128E-04  584593.8 4131125.6    88.6     0.60     5.58
3.21     YES
 L0002212         0   0.56128E-04  584581.8 4131125.5    88.8     0.60     5.58
3.21     YES
 L0002213         0   0.56128E-04  584569.8 4131125.3    89.0     0.60     5.58
3.21     YES
 L0002214         0   0.56128E-04  584557.8 4131125.2    89.1     0.60     5.58
3.21     YES
 L0002215         0   0.56128E-04  584545.8 4131125.0    89.2     0.60     5.58
3.21     YES
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 L0002216         0   0.56128E-04  584533.8 4131124.9    89.3      0.60      5.58
3.21     YES
 L0002217         0   0.56128E-04  584521.8 4131124.7    89.4      0.60      5.58
3.21     YES
 L0002218         0   0.56128E-04  584509.8 4131124.6    89.6      0.60      5.58
3.21     YES
 L0002219         0   0.56128E-04  584497.8 4131124.5    89.8      0.60      5.58
3.21     YES
 L0002220         0   0.56128E-04  584485.8 4131124.3    90.0      0.60      5.58
3.21     YES
 L0002221         0   0.56128E-04  584473.8 4131124.2    90.2      0.60      5.58
3.21     YES
 L0002222         0   0.56128E-04  584461.8 4131124.0    90.3      0.60      5.58
3.21     YES
 L0002223         0   0.56128E-04  584449.8 4131123.9    90.5      0.60      5.58
3.21     YES
 L0002224         0   0.56128E-04  584437.8 4131123.7    90.7      0.60      5.58
3.21     YES
 L0002225         0   0.56128E-04  584425.8 4131123.6    90.9      0.60      5.58
3.21     YES
 L0002226         0   0.56128E-04  584413.8 4131123.5    91.1      0.60      5.58
3.21     YES
 L0002227         0   0.56128E-04  584401.8 4131123.3    91.2      0.60      5.58
3.21     YES
 L0002228         0   0.56128E-04  584389.8 4131123.2    91.4      0.60      5.58
3.21     YES
 L0002229         0   0.56128E-04  584377.8 4131123.0    91.5      0.60      5.58
3.21     YES
 L0002230         0   0.56128E-04  584365.8 4131123.0    91.7      0.60      5.58
3.21     YES
 L0002231         0   0.56128E-04  584353.8 4131122.9    91.8      0.60      5.58
3.21     YES
 L0002232         0   0.56128E-04  584341.8 4131122.9    92.0      0.60      5.58
3.21     YES
 L0002233         0   0.56128E-04  584329.8 4131122.8    92.1      0.60      5.58
3.21     YES
 L0002234         0   0.56128E-04  584317.8 4131122.8    92.3      0.60      5.58
3.21     YES
 L0002235         0   0.56128E-04  584305.8 4131122.7    92.4      0.60      5.58
3.21     YES
 L0002236         0   0.56128E-04  584293.8 4131122.7    92.5      0.60      5.58
3.21     YES
 L0002237         0   0.56128E-04  584281.8 4131122.6    92.6      0.60      5.58
3.21     YES
 L0002238         0   0.56128E-04  584269.8 4131122.6    92.8      0.60      5.58
3.21     YES
 L0002239         0   0.56128E-04  584257.8 4131122.5    92.9      0.60      5.58
3.21     YES
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 L0002240         0   0.56128E-04  584245.8 4131122.5    93.1     0.60     5.58
3.21     YES
 L0002241         0   0.56128E-04  584233.8 4131122.4    93.2     0.60     5.58
3.21     YES
 L0002242         0   0.56128E-04  584221.8 4131122.4    92.5     0.60     5.58
3.21     YES
 L0002243         0   0.56128E-04  584209.8 4131122.3    91.6     0.60     5.58
3.21     YES
 L0002244         0   0.56128E-04  584197.8 4131122.3    89.8     0.60     5.58
3.21     YES
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                           *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                  SOURCE IDs
 -----------                                                  ----------


  ALL        L0001876    , L0001877    , L0001878    , L0001879    , L0001880    ,
L0001881    , L0001882    , L0001883    ,

             L0001884    , L0001885    , L0001886    , L0001887    , L0001888    ,
L0001889    , L0001890    , L0001891    ,

             L0001892    , L0001893    , L0001894    , L0001895    , L0001896    ,
L0001897    , L0001898    , L0001899    ,

             L0001900    , L0001901    , L0001902    , L0001903    , L0001904    ,
L0001905    , L0001906    , L0001907    ,

             L0001908    , L0001909    , L0001910    , L0001911    , L0001912    ,
L0001913    , L0001914    , L0001915    ,

             L0001916    , L0001917    , L0001918    , L0001919    , L0001920    ,
L0001921    , L0001922    , L0001923    ,

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L0001937    , L0001938    , L0001939    ,

             L0001940    , L0001941    , L0001942    , L0001943    , L0001944    ,
L0001945    , L0001946    , L0001947    ,

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L0001969    , L0001970    , L0001971    ,

             L0001972    , L0001973    , L0001974    , L0001975    , L0001976    ,
L0001977    , L0001978    , L0001979    ,

             L0001980    , L0001981    , L0001982    , L0001983    , L0001984    ,
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L0001993    , L0001994    , L0001995    ,

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L0002001    , L0002002    , L0002003    ,

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L0002009    , L0002010    , L0002011    ,

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L0002017    , L0002018    , L0002019    ,

             L0002020    , L0002021    , L0002022    , L0002023    , L0002024    ,
L0002025    , L0002026    , L0002027    ,

             L0002028    , L0002029    , L0002030    , L0002031    , L0002032    ,
L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                                                  *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                                SOURCE IDs
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L0002041    , L0002042    , L0002043    ,

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L0002049    , L0002050    , L0002051    ,

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L0002191    , L0002192    , L0002193    ,

             L0002194    , L0002195    , L0002196    , L0002197    , L0002198    ,
L0002199    , L0002200    , L0002201    ,

             L0002202    , L0002203    , L0002204    , L0002205    , L0002206    ,
L0002207    , L0002208    , L0002209    ,

             L0002210    , L0002211    , L0002212    , L0002213    , L0002214    ,
L0002215    , L0002216    , L0002217    ,

             L0002218    , L0002219    , L0002220    , L0002221    , L0002222    ,
L0002223    , L0002224    , L0002225    ,

             L0002226    , L0002227    , L0002228    , L0002229    , L0002230    ,
L0002231    , L0002232    , L0002233    ,

             L0002234    , L0002235    , L0002236    , L0002237    , L0002238    ,
L0002239    , L0002240    , L0002241    ,
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             L0002242    , L0002243    , L0002244    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                            SOURCE IDs
  --------   ---------                                            ----------


              1918000.   L0001876    , L0001877    , L0001878    , L0001879    ,
L0001880    , L0001881    , L0001882    ,
 L0001883    ,

             L0001884    , L0001885    , L0001886    , L0001887    , L0001888    ,
L0001889    , L0001890    , L0001891    ,

             L0001892    , L0001893    , L0001894    , L0001895    , L0001896    ,
L0001897    , L0001898    , L0001899    ,

             L0001900    , L0001901    , L0001902    , L0001903    , L0001904    ,
L0001905    , L0001906    , L0001907    ,

             L0001908    , L0001909    , L0001910    , L0001911    , L0001912    ,
L0001913    , L0001914    , L0001915    ,

             L0001916    , L0001917    , L0001918    , L0001919    , L0001920    ,
L0001921    , L0001922    , L0001923    ,

             L0001924    , L0001925    , L0001926    , L0001927    , L0001928    ,
L0001929    , L0001930    , L0001931    ,

             L0001932    , L0001933    , L0001934    , L0001935    , L0001936    ,
L0001937    , L0001938    , L0001939    ,

             L0001940    , L0001941    , L0001942    , L0001943    , L0001944    ,
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             L0001948    , L0001949    , L0001950    , L0001951    , L0001952    ,
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             L0002004    , L0002005    , L0002006    , L0002007    , L0002008    ,
L0002009    , L0002010    , L0002011    ,

             L0002012    , L0002013    , L0002014    , L0002015    , L0002016    ,
L0002017    , L0002018    , L0002019    ,

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L0002025    , L0002026    , L0002027    ,

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L0002033    , L0002034    , L0002035    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------
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             L0002036    , L0002037    , L0002038    , L0002039    , L0002040    ,
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             L0002044    , L0002045    , L0002046    , L0002047    , L0002048    ,
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             L0002202    , L0002203    , L0002204    , L0002205    , L0002206    ,
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             L0002210    , L0002211    , L0002212    , L0002213    , L0002214    ,
L0002215    , L0002216    , L0002217    ,

             L0002218    , L0002219    , L0002220    , L0002221    , L0002222    ,
L0002223    , L0002224    , L0002225    ,

             L0002226    , L0002227    , L0002228    , L0002229    , L0002230    ,
L0002231    , L0002232    , L0002233    ,

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L0002239    , L0002240    , L0002241    ,

             L0002242    , L0002243    , L0002244    ,
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30
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                                   PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                   *** DISCRETE CARTESIAN RECEPTORS ***
                                                 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                 (METERS)

     ( 584511.4, 4131106.6,      89.6,      89.6,       0.0);         ( 584291.4,
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     ( 584311.4, 4131146.6,      91.6,      91.6,       0.0);         ( 584331.4,
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     ( 584351.4, 4131146.6,      91.1,      91.1,       0.0);         ( 584371.4,
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     ( 584391.4, 4131146.6,      90.6,      90.6,       0.0);         ( 584411.4,
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     ( 584431.4, 4131146.6,      90.4,      90.4,       0.0);         ( 584451.4,
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     ( 584471.4, 4131146.6,      90.1,      90.1,       0.0);         ( 584491.4,
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     ( 584511.4, 4131146.6,      89.3,      89.3,       0.0);         ( 584231.4,
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     ( 584251.4, 4131166.6,      91.8,      91.8,       0.0);         ( 584271.4,
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     ( 584291.4, 4131166.6,      91.5,      91.5,       0.0);         ( 584311.4,
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     ( 584331.4, 4131166.6,      91.3,      91.3,       0.0);         ( 584351.4,
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     ( 584271.4, 4131186.6,      91.5,      91.5,       0.0);         ( 584291.4,
4131186.6,      91.3,      91.3,       0.0);
     ( 584311.4, 4131186.6,      91.3,      91.3,       0.0);         ( 584331.4,
4131186.6,      91.2,      91.2,       0.0);
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     ( 584391.4, 4131186.6,      90.5,      90.5,       0.0);         ( 584411.4,
4131186.6,      90.2,      90.2,       0.0);
     ( 584431.4, 4131186.6,      90.1,      90.1,       0.0);         ( 584451.4,
4131186.6,      89.6,      89.6,       0.0);
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     ( 584291.4, 4131206.6,      91.3,      91.3,       0.0);          ( 584311.4,
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     ( 584331.4, 4131206.6,      91.0,      91.0,       0.0);          ( 584351.4,
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     ( 584371.4, 4131206.6,      90.7,      90.7,       0.0);          ( 584391.4,
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     ( 584331.4, 4131246.6,      90.6,      90.6,       0.0);          ( 584351.4,
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     ( 584371.4, 4131246.6,      90.1,      90.1,       0.0);          ( 584391.4,
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     ( 584451.4, 4131246.6,      88.8,      88.8,       0.0);          ( 584471.4,
4131246.6,      88.8,      88.8,       0.0);
     ( 584211.4, 4131266.6,      90.8,      92.8,       0.0);          ( 584231.4,
4131266.6,      92.6,      92.6,       0.0);
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     ( 584251.4, 4131266.6,      91.9,      91.9,       0.0);         ( 584271.4,
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♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                         ***        17:24:30

                                    PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                              *** DISCRETE CARTESIAN RECEPTORS ***
                                            (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                            (METERS)

     ( 584291.4, 4131266.6,      91.0,      91.0,       0.0);         ( 584211.4,
4131286.6,      91.8,      91.8,       0.0);
     ( 584231.4, 4131286.6,      92.5,      92.5,       0.0);         ( 584251.4,
4131286.6,      92.1,      92.1,       0.0);
     ( 584211.4, 4131306.6,      92.6,      92.6,       0.0);         ( 584231.4,
4131306.6,      92.3,      92.3,       0.0);
     ( 584191.4, 4131326.6,      89.8,      92.8,       0.0);         ( 584211.4,
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     ( 584191.4, 4131346.6,      91.0,      91.0,       0.0);         ( 584171.4,
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     ( 584191.4, 4131366.6,      93.0,      93.0,       0.0);

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
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                                    PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                       * SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT
BE PERFORMED *
                         LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR
FASTAREA/FASTALL


                              SOURCE          - - RECEPTOR LOCATION - -
DISTANCE
                                ID           XR (METERS)   YR (METERS)
(METERS)
                            - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - -
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```
                             L0002176            584511.4     4131106.6
-0.40
                             L0002177            584511.4     4131106.6
-10.29
                             L0002178            584511.4     4131106.6
0.62
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                       ***       17:24:30

                                 PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                            *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                               (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1
1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                            (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,
10.80,
♀ *** AERMOD - VERSION  18081 ***   ***
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C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                         ***       17:24:30

                                   PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                    *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   Met Data\745090.SFC
                  Met Version:  14134
   Profile file:   Met Data\745090.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:    23244                 Upper air station no.:    23230
                  Name: UNKNOWN                                 Name:
OAKLAND/WSO_AP
                  Year:   2009                                  Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01  -12.1  0.213 -9.000 -9.000 -999.  236.     72.6  0.09   0.54
1.00    2.86    1.   10.0  282.5    2.0
 09 01 01   1 02  -14.9  0.261 -9.000 -9.000 -999.  321.    109.2  0.09   0.54
1.00    3.36   18.   10.0  282.0    2.0
 09 01 01   1 03   -9.1  0.160 -9.000 -9.000 -999.  158.     40.7  0.09   0.54
1.00    2.36   24.   10.0  282.0    2.0
 09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.4    2.0
 09 01 01   1 05   -3.9  0.075 -9.000 -9.000 -999.   49.      9.8  0.09   0.54
1.00    1.76   23.   10.0  281.4    2.0
 09 01 01   1 06   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36    2.   10.0  280.9    2.0
 09 01 01   1 07   -9.1  0.159 -9.000 -9.000 -999.  153.     40.5  0.09   0.54
1.00    2.36   15.   10.0  280.9    2.0
 09 01 01   1 08   -4.7  0.084 -9.000 -9.000 -999.   61.     11.7  0.15   0.54
0.73    1.76  323.   10.0  280.9    2.0
 09 01 01   1 09   -4.9  0.212 -9.000 -9.000 -999.  234.    179.0  0.15   0.54
0.38    2.36  357.   10.0  280.4    2.0
 09 01 01   1 10    5.7  0.163  0.241  0.014   89.  159.    -69.3  0.09   0.54
```

```
0.25    1.76   11.   10.0  280.9    2.0
 09 01 01   1 11   12.2 -9.000 -9.000 -9.000  158. -999. -99999.0  0.24   0.54
0.21    0.00    0.   10.0  280.9    2.0
 09 01 01   1 12   16.0  0.426  0.456  0.016  216.  668.   -442.4  0.15   0.54
0.19    4.36  346.   10.0  281.4    2.0
 09 01 01   1 13   16.6  0.236  0.493  0.015  263.  305.    -71.8  0.36   0.54
0.19    1.76  253.   10.0  281.4    2.0
 09 01 01   1 14   14.2 -9.000 -9.000 -9.000  297. -999. -99999.0  0.24   0.54
0.20    0.00    0.   10.0  282.0    2.0
 09 01 01   1 15   44.9 -9.000 -9.000 -9.000  387. -999. -99999.0  0.24   0.54
0.23    0.00    0.   10.0  283.8    2.0
 09 01 01   1 16   13.2 -9.000 -9.000 -9.000  410. -999. -99999.0  0.24   0.54
0.31    0.00    0.   10.0  284.1    2.0
 09 01 01   1 17  -12.3  0.130 -9.000 -9.000 -999.  112.     16.2  0.15   0.54
0.55    2.36  351.   10.0  282.1    2.0
 09 01 01   1 18   -9.3  0.106 -9.000 -9.000 -999.   83.     11.6  0.36   0.54
1.00    1.76  297.   10.0  282.1    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  281.1    2.0
 09 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.24   0.54
1.00    0.00    0.   10.0  280.1    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 09 01 01 01   10.0 1    1.    2.86   282.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                       ***        17:24:30

                                   PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
```

```
 , L0001878    , L0001879    , L0001880    ,
               L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
               L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
               L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                          *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                      ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                          X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
         584511.38    4131106.65        0.51042                         584291.38
4131146.65        0.30343
         584311.38    4131146.65        0.31109                         584331.38
4131146.65        0.31704
         584351.38    4131146.65        0.32072                         584371.38
4131146.65        0.32388
         584391.38    4131146.65        0.32830                         584411.38
4131146.65        0.33288
         584431.38    4131146.65        0.33664                         584451.38
4131146.65        0.33931
         584471.38    4131146.65        0.34329                         584491.38
4131146.65        0.34595
         584511.38    4131146.65        0.34768                         584231.38
4131166.65        0.16680
         584251.38    4131166.65        0.17978                         584271.38
4131166.65        0.18863
         584291.38    4131166.65        0.19539                         584311.38
4131166.65        0.20095
         584331.38    4131166.65        0.20537                         584351.38
4131166.65        0.20848
         584371.38    4131166.65        0.21123                         584391.38
4131166.65        0.21372
         584411.38    4131166.65        0.21604                         584431.38
4131166.65        0.21807
         584451.38    4131166.65        0.21937                         584471.38
4131166.65        0.22133
         584491.38    4131166.65        0.22235                         584511.38
4131166.65        0.22273
         584231.38    4131186.65        0.12217                         584251.38
4131186.65        0.13095
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          584271.38    4131186.65         0.13753                            584291.38
4131186.65         0.14275
          584311.38    4131186.65         0.14701                            584331.38
4131186.65         0.15048
          584351.38    4131186.65         0.15314                            584371.38
4131186.65         0.15547
          584391.38    4131186.65         0.15726                            584411.38
4131186.65         0.15877
          584431.38    4131186.65         0.16009                            584451.38
4131186.65         0.16087
          584471.38    4131186.65         0.16199                            584491.38
4131186.65         0.16241
          584511.38    4131186.65         0.16237                            584231.38
4131206.65         0.09707
          584251.38    4131206.65         0.10284                            584271.38
4131206.65         0.10768
          584291.38    4131206.65         0.11174                            584311.38
4131206.65         0.11507
          584331.38    4131206.65         0.11775                            584351.38
4131206.65         0.11997
          584371.38    4131206.65         0.12186                            584391.38
4131206.65         0.12335
          584411.38    4131206.65         0.12454                            584431.38
4131206.65         0.12544
          584451.38    4131206.65         0.12589                            584471.38
4131206.65         0.12645
          584491.38    4131206.65         0.12654                            584211.38
4131226.65         0.07436
          584231.38    4131226.65         0.08009                            584251.38
4131226.65         0.08444
          584271.38    4131226.65         0.08813                            584291.38
4131226.65         0.09128
          584311.38    4131226.65         0.09392                            584331.38
4131226.65         0.09609
          584351.38    4131226.65         0.09792                            584371.38
4131226.65         0.09943
          584391.38    4131226.65         0.10068                            584411.38
4131226.65         0.10165
          584431.38    4131226.65         0.10230                            584451.38
4131226.65         0.10250
          584471.38    4131226.65         0.10280                            584491.38
4131226.65         0.10269
          584211.38    4131246.65         0.06384                            584231.38
4131246.65         0.06813
          584251.38    4131246.65         0.07147                            584271.38
4131246.65         0.07435
          584291.38    4131246.65         0.07683                            584311.38
4131246.65         0.07893
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         584331.38    4131246.65        0.08070                     584351.38
4131246.65        0.08220
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                    INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                      X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
         584371.38    4131246.65        0.08341                     584391.38
4131246.65        0.08443
         584411.38    4131246.65        0.08522                     584431.38
4131246.65        0.08570
         584451.38    4131246.65        0.08573                     584471.38
4131246.65        0.08587
         584211.38    4131266.65        0.05634                     584231.38
4131266.65        0.05919
         584251.38    4131266.65        0.06183                     584271.38
4131266.65        0.06411
         584291.38    4131266.65        0.06607                     584211.38
4131286.65        0.05012
         584231.38    4131286.65        0.05229                     584251.38
4131286.65        0.05435
         584211.38    4131306.65        0.04493                     584231.38
4131306.65        0.04675
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         584191.38    4131326.65        0.03899                      584211.38
4131326.65        0.04068
         584191.38    4131346.65        0.03582                      584171.38
4131366.65        0.03178
         584191.38    4131366.65        0.03291

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
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                                   PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
                 L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
                 L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
                 L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                             ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)             X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584511.38   4131106.65        1.91655  (11022822)               584291.38
 4131146.65        1.38661  (11011505)
        584311.38   4131146.65        1.39869  (11011505)               584331.38
 4131146.65        1.40734  (11011505)
        584351.38   4131146.65        1.41203  (11011505)               584371.38
 4131146.65        1.41645  (11011505)
        584391.38   4131146.65        1.42278  (11011505)               584411.38
 4131146.65        1.42825  (11011505)
        584431.38   4131146.65        1.43068  (11011505)               584451.38
 4131146.65        1.42989  (11011505)
        584471.38   4131146.65        1.43078  (09011503)               584491.38
 4131146.65        1.43089  (09011503)
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       584511.38  4131146.65        1.43308  (09021919)                584231.38
4131166.65        0.89785  (11011505)
       584251.38  4131166.65        0.91898  (11011505)                584271.38
4131166.65        0.93096  (11011505)
       584291.38  4131166.65        0.93937  (09011503)                584311.38
4131166.65        0.94734  (09011503)
       584331.38  4131166.65        0.95306  (09011503)                584351.38
4131166.65        0.95887  (09021919)
       584371.38  4131166.65        0.96370  (09021919)                584391.38
4131166.65        0.96751  (09021919)
       584411.38  4131166.65        0.97026  (09021919)                584431.38
4131166.65        0.97147  (09021919)
       584451.38  4131166.65        0.97022  (09021919)                584471.38
4131166.65        0.96790  (09021919)
       584491.38  4131166.65        0.96918  (12120320)                584511.38
4131166.65        0.96990  (12120320)
       584231.38  4131186.65        0.69056  (09021919)                584251.38
4131186.65        0.70665  (09021919)
       584271.38  4131186.65        0.71799  (09021919)                584291.38
4131186.65        0.72663  (09021919)
       584311.38  4131186.65        0.73321  (09021919)                584331.38
4131186.65        0.73790  (09021919)
       584351.38  4131186.65        0.74057  (09021919)                584371.38
4131186.65        0.74163  (09021919)
       584391.38  4131186.65        0.74426  (12120320)                584411.38
4131186.65        0.74744  (12120320)
       584431.38  4131186.65        0.74990  (12120320)                584451.38
4131186.65        0.75098  (12120320)
       584471.38  4131186.65        0.75146  (12120320)                584491.38
4131186.65        0.74968  (12120320)
       584511.38  4131186.65        0.74501  (12120320)                584231.38
4131206.65        0.57082  (09021919)
       584251.38  4131206.65        0.58023  (09021919)                584271.38
4131206.65        0.58723  (09021919)
       584291.38  4131206.65        0.59351  (12120320)                584311.38
4131206.65        0.60000  (12120320)
       584331.38  4131206.65        0.60531  (12120320)                584351.38
4131206.65        0.60956  (12120320)
       584371.38  4131206.65        0.61290  (12120320)                584391.38
4131206.65        0.61516  (12120320)
       584411.38  4131206.65        0.61629  (12120320)                584431.38
4131206.65        0.61602  (12120320)
       584451.38  4131206.65        0.61371  (12120320)                584471.38
4131206.65        0.60940  (12120320)
       584491.38  4131206.65        0.60145  (12120320)                584211.38
4131226.65        0.47635  (12120320)
       584231.38  4131226.65        0.48783  (12120320)                584251.38
4131226.65        0.49664  (12120320)
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       584271.38   4131226.65        0.50369  (12120320)                584291.38
 4131226.65        0.50961  (12120320)
       584311.38   4131226.65        0.51444  (12120320)                584331.38
 4131226.65        0.51811  (12120320)
       584351.38   4131226.65        0.52070  (12120320)                584371.38
 4131226.65        0.52205  (12120320)
       584391.38   4131226.65        0.52198  (12120320)                584411.38
 4131226.65        0.52015  (12120320)
       584431.38   4131226.65        0.51606  (12120320)                584451.38
 4131226.65        0.51159  (09123123)
       584471.38   4131226.65        0.50930  (12010208)                584491.38
 4131226.65        0.50485  (12010208)
       584211.38   4131246.65        0.42297  (12120320)                584231.38
 4131246.65        0.43045  (12120320)
       584251.38   4131246.65        0.43712  (12120320)                584271.38
 4131246.65        0.44241  (12120320)
       584291.38   4131246.65        0.44657  (12120320)                584311.38
 4131246.65        0.44952  (12120320)
       584331.38   4131246.65        0.45121  (12120320)                584351.38
 4131246.65        0.45150  (12120320)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
               L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
               L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
               L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF TOG      IN MICROGRAMS/M**3
                       **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
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 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584371.38   4131246.65       0.45011  (12120320)                584391.38
 4131246.65       0.44679  (09123123)
        584411.38   4131246.65       0.44588  (12010208)                584431.38
 4131246.65       0.44482  (12010208)
        584451.38   4131246.65       0.44141  (12010208)                584471.38
 4131246.65       0.43786  (10013002)
        584211.38   4131266.65       0.38223  (12120320)                584231.38
 4131266.65       0.38514  (12120320)
        584251.38   4131266.65       0.39004  (12120320)                584271.38
 4131266.65       0.39335  (12120320)
        584291.38   4131266.65       0.39544  (12120320)                584211.38
 4131286.65       0.34606  (12120320)
        584231.38   4131286.65       0.34807  (12120320)                584251.38
 4131286.65       0.35022  (12120320)
        584211.38   4131306.65       0.31453  (12120320)                584231.38
 4131306.65       0.31511  (12120320)
        584191.38   4131326.65       0.28521  (12120320)                584211.38
 4131326.65       0.28670  (12120320)
        584191.38   4131346.65       0.26385  (12010208)                584171.38
 4131366.65       0.24489  (12010208)
        584191.38   4131366.65       0.24621  (09123123)

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
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 *** AERMET - VERSION  14134 ***   ***
                        ***       17:24:30

                                  PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                             *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
              L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
              L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
              L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                                 ** CONC OF TOG      IN MICROGRAMS/M**3
```

```
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584511.38   4131106.65        0.85675b (09112324)                584291.38
 4131146.65        0.68854b (13111924)
        584311.38   4131146.65        0.70086b (13111924)                584331.38
 4131146.65        0.71017b (13111924)
        584351.38   4131146.65        0.71450b (13111924)                584371.38
 4131146.65        0.71858b (13111924)
        584391.38   4131146.65        0.72672b (13111924)                584411.38
 4131146.65        0.73527b (13111924)
        584431.38   4131146.65        0.74217b (13111924)                584451.38
 4131146.65        0.74668b (13111924)
        584471.38   4131146.65        0.75479b (13111924)                584491.38
 4131146.65        0.75943b (13111924)
        584511.38   4131146.65        0.76250b (13111924)                584231.38
 4131166.65        0.43662b (10012224)
        584251.38   4131166.65        0.45463b (10012224)                584271.38
 4131166.65        0.46424b (13111924)
        584291.38   4131166.65        0.47437b (13111924)                584311.38
 4131166.65        0.48301b (13111924)
        584331.38   4131166.65        0.48973b (13111924)                584351.38
 4131166.65        0.49387b (13111924)
        584371.38   4131166.65        0.49800b (13111924)                584391.38
 4131166.65        0.50205b (13111924)
        584411.38   4131166.65        0.50599b (13111924)                584431.38
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        584451.38   4131166.65        0.51155b (13111924)                584471.38
 4131166.65        0.51551b (13111924)
        584491.38   4131166.65        0.51721b (13111924)                584511.38
 4131166.65        0.51760b (13111924)
        584231.38   4131186.65        0.34626b (10012224)                584251.38
 4131186.65        0.35885b (10012224)
        584271.38   4131186.65        0.36619b (10012224)                584291.38
 4131186.65        0.37199b (10012224)
        584311.38   4131186.65        0.37686b (10012224)                584331.38
 4131186.65        0.38067b (10012224)
        584351.38   4131186.65        0.38296b (10012224)                584371.38
 4131186.65        0.38549b (10012224)
        584391.38   4131186.65        0.38706b (10012224)                584411.38
 4131186.65        0.38927b (13111924)
        584431.38   4131186.65        0.39135b (13111924)                584451.38
 4131186.65        0.39233b (13111924)
        584471.38   4131186.65        0.39430b (13111924)                584491.38
 4131186.65        0.39473b (13111924)
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        584511.38   4131186.65        0.39412b (13111924)                584231.38
 4131206.65        0.29388b (10012224)
        584251.38   4131206.65        0.29910b (10012224)                584271.38
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        584291.38   4131206.65        0.30859b (10012224)                584311.38
 4131206.65        0.31209b (10012224)
        584331.38   4131206.65        0.31462b (10012224)                584351.38
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 4131206.65        0.32192b (10012224)
        584451.38   4131206.65        0.32176b (10012224)                584471.38
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        584491.38   4131206.65        0.32201b (10012224)                584211.38
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 4131246.65        0.23346b (10012224)
        584331.38   4131246.65        0.23516b (10012224)                584351.38
 4131246.65        0.23671b (10012224)
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
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VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0001876    , L0001877
 , L0001878    , L0001879    , L0001880    ,
              L0001881    , L0001882    , L0001883    , L0001884    , L0001885
 , L0001886    , L0001887    , L0001888    ,
              L0001889    , L0001890    , L0001891    , L0001892    , L0001893
 , L0001894    , L0001895    , L0001896    ,
              L0001897    , L0001898    , L0001899    , L0001900    , L0001901
 , L0001902    , L0001903    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                       ** CONC OF TOG      IN MICROGRAMS/M**3
                    **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
        584371.38   4131246.65        0.23788b (10012224)                584391.38
 4131246.65        0.23901b (10012224)
        584411.38   4131246.65        0.23981b (10012224)                584431.38
 4131246.65        0.24011b (10012224)
        584451.38   4131246.65        0.23934b (10012224)                584471.38
 4131246.65        0.23927b (10012224)
        584211.38   4131266.65        0.19434b (10012224)                584231.38
 4131266.65        0.19898b (10012224)
        584251.38   4131266.65        0.20193b (10012224)                584271.38
 4131266.65        0.20439b (10012224)
        584291.38   4131266.65        0.20637b (10012224)                584211.38
 4131286.65        0.17789b (10012224)
        584231.38   4131286.65        0.18054b (10012224)                584251.38
 4131286.65        0.18293b (10012224)
        584211.38   4131306.65        0.16337b (10012224)                584231.38
 4131306.65        0.16559b (10012224)
        584191.38   4131326.65        0.14778b (10012224)                584211.38
 4131326.65        0.15126b (10012224)
        584191.38   4131346.65        0.13921b (10012224)                584171.38
 4131366.65        0.12879b (10012224)
        584191.38   4131366.65        0.13058b (10012224)

♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***


                                    ** CONC OF TOG      IN MICROGRAMS/M**3
                **


                         NETWORK
GROUP ID                       AVERAGE CONC               RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -


ALL       1ST HIGHEST VALUE IS       0.51042 AT (  584511.38,  4131106.65,
89.58,    89.58,    0.00)  DC
          2ND HIGHEST VALUE IS       0.34768 AT (  584511.38,  4131146.65,
89.29,    89.29,    0.00)  DC
          3RD HIGHEST VALUE IS       0.34595 AT (  584491.38,  4131146.65,
89.80,    89.80,    0.00)  DC
          4TH HIGHEST VALUE IS       0.34329 AT (  584471.38,  4131146.65,
90.08,    90.08,    0.00)  DC
          5TH HIGHEST VALUE IS       0.33931 AT (  584451.38,  4131146.65,
90.04,    90.04,    0.00)  DC
          6TH HIGHEST VALUE IS       0.33664 AT (  584431.38,  4131146.65,
90.39,    90.39,    0.00)  DC
          7TH HIGHEST VALUE IS       0.33288 AT (  584411.38,  4131146.65,
90.54,    90.54,    0.00)  DC
          8TH HIGHEST VALUE IS       0.32830 AT (  584391.38,  4131146.65,
90.61,    90.61,    0.00)  DC
          9TH HIGHEST VALUE IS       0.32388 AT (  584371.38,  4131146.65,
90.75,    90.75,    0.00)  DC
         10TH HIGHEST VALUE IS       0.32072 AT (  584351.38,  4131146.65,
91.09,    91.09,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                          ***        17:24:30
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                                   PAGE  25
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                                *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF TOG      IN MICROGRAMS/M**3
                **

                                                              DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       1.91655  ON 11022822: AT (  584511.38,
4131106.65,    89.58,    89.58,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                                *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF TOG      IN MICROGRAMS/M**3
                **

                                                              DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
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ALL      HIGH   1ST HIGH VALUE IS       0.85675b ON 09112324: AT (  584511.38,
4131106.65,    89.58,    89.58,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  18081 ***   ***
C:\Users\ace.malisos\Desktop\Westport_StevensCrk_PM\Westport_Stevens ***
08/18/18
 *** AERMET - VERSION  14134 ***   ***
                        ***        17:24:30

                                   PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of             0 Fatal Error Message(s)
 A Total of           182 Warning Message(s)
 A Total of         15496 Informational Message(s)

 A Total of         43872 Hours Were Processed

 A Total of         14061 Calm Hours Identified

 A Total of          1435 Missing Hours Identified (  3.27 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 SO W320     386        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     387        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     388        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     389        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
 SO W320     390        VPARM: Input Parameter May Be Out-of-Range for Parameter
       QS
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SO W320     391         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     392         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     393         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     394         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     414         VPARM: Input Parameter May Be Out-of-Range for Parameter
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SO W320     415        VPARM: Input Parameter May Be Out-of-Range for Parameter
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       48

   ************************************
   *** AERMOD Finishes Successfully ***
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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**8/14/2018**
Contact Name	Noemi Wyss
Affiliation	Kimley-Horn and Associates
Phone	(669) 800-4152
Email	Noemi.Wyss@kimley-horn.com
Project Name	Westport
Address	21267- 21275 Stevens Creek Blvd
City	Cupertino
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Commercial (Shopping Center)
Project Size (# of units or building square feet)	71,254 square-feet

Comments: The project site is the existing The Oaks shopping center

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A. Incomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B blue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Facility Name	Address	Plant No.	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments
705 feet southwest	Cupertino Union 76	21530 Stevens Creek Blvd	103452	8.78895	0.0433	0	S1	Gas Dispensing Facility		Updated to include OEHHA factor, use GDF multiplier
~~961 feet southwest~~	~~Apple Computer Inc~~	~~10101 Bubb Road~~	~~12424~~	~~50.185~~	~~0.0269~~	~~0.0652~~	~~S1~~			Shutdown
1065 feet southwest	CalTrans District #4	10130 Bubb Road	109737	9.1027	0.0449	0	S1	Gas Dispensing Facility		Updated to include OEHHA factor, use GDF multiplier
904 feet southeast	Foothill/DeAnza Community College District	21250 Stevens Creek Blvd	15654	34.425	0.063397	1.3377	S20-S31	Generators		Updated to include OEHHA factor, use Diesel IC multiplier
904 feet southeast	DeAnza College	21250 Stevens Creek Blvd	100821	9.1027	0.0449	0	S1	Gas Dispensing Facility		Updated to include OEHHA factor, use GDF multiplier

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or less. To
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010.
    Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

Date last updated: 03/13/2018

How to Use the Distance Adjustment Multiplier Tool for Diesel Internal Combustion (IC) Engines

This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

1. Obtain the facility diesel IC engine(s) cancer risk and/or PM2.5 concentration from the District's Stationary Source Screening Analysis tool only for facilities where the source is listed as "generator." If the distance to the nearest receptor is less than 25 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk, chronic hazard index or PM2.5 estimates.

2. Determine the shortest distance from each diesel IC engine to the nearest receptor. Select the shortest distance to receptor found.

3. In the table below, enter the cancer risk and/or PM2.5 concentration found in step 1 for the diesel IC engine in the row which aligns with the shortest distance from each diesel IC engine to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 280 meters, use the multiplier 0.04. The resulting product is the adjusted cancer risk in a million or the adjusted PM2.5 concentration for the diesel IC engine

Note: This distance adjustment multiplier may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for diesel IC engines. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Note: This distance adjustment multiplier may also be used to adjust the screening values for chronic hazard index found in the District's Stationary Source Screening Analysis Tool for facilities with only diesel IC engines.

Distance (meters)	Distance (feet)	Distance Adjustment Multiplier	Enter Cancer Risk Estimate	Adjusted Cancer Risk Estimate	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
25	82	0.85		0		0
30	98.4	0.73		0		0
35	115	0.64		0		0
40	131	0.58		0		0
50	164	0.5		0		0
60	197	0.41		0		0
70	230	0.31		0		0
80	262	0.28		0		0
90	295	0.25		0		0
100	328	0.22		0		0
110	361	0.18		0		0
120	394	0.16		0		0
130	426	0.15		0		0
140	459	0.14		0		0
150	492	0.12		0		0
160	525	0.1		0		0
180	590	0.09		0		0
200	656	0.08		0		0
220	722	0.07		0		0
240	787	0.06		0		0
260	853	0.05	9.1027	0.455135		0
280	918	0.04		0		0

How to Use the Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities (GDF)

This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions (GDF's).

1. Obtain the GDF cancer risk and/or chronic hazard index from the District's Stationary Source Screening Analysis tool for facilities where the Plant No. is preceded with a 'G'. If the distance to the nearest receptor is less than 20 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk and/or chronic hazard index estimate.

2. Determine the shortest distance from the GDF to the nearest receptor.

3. In the table below, enter the cancer risk and/or chronic hazard index found in step 1 for the GDF in the row which aligns with the shortest distance from each GDF to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 300 meters, use the multiplier 0.015. The resulting product is the adjusted cancer risk in a million or the adjusted chronic hazard index for the GDF.

Note: These distance adjustment multipliers may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for gasoline dispensing facilities. This distance multiplier tool may <u>not</u> be used to adjust values from an HRA if an HRA for the facility was conducted.

Distance meters	Distance feet	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Chronic Hazard Index	Adjusted Chronic Hazard Index
20	66	1.000		0		0
25	82	0.728		0		0
30	98	0.559		0		0
35	115	0.445		0		0
40	131	0.365		0		0
45	148	0.305		0		0
50	164	0.260		0		0
55	180	0.225		0		0
60	197	0.197		0		0
65	213	0.174		0		0
70	230	0.155		0		0
75	246	0.139		0		0
80	262	0.126		0		0
85	279	0.114		0		0
90	295	0.104		0		0
95	312	0.096		0		0
100	328	0.088		0		0
105	344	0.082		0		0
110	361	0.076		0		0
115	377	0.071		0		0
120	394	0.066		0		0
125	410	0.062		0		0
130	426	0.058		0		0
135	443	0.055		0		0
140	459	0.052		0		0
145	476	0.049		0		0
150	492	0.046		0		0
155	508	0.044		0		0
160	525	0.042		0		0
165	541	0.040		0		0
170	558	0.038		0		0
175	574	0.036		0		0
180	590	0.034		0		0

185	607	0.033		0		0
190	623	0.031		0		0
195	640	0.030		0		0
200	656	0.029		0		0
205	672	0.028		0		0
210	689	0.027		0		0
215	705	0.026	8.78895	0.226083143	0	0
220	722	0.025		0		0
225	738	0.024		0		0
230	754	0.023		0		0
235	771	0.022		0		0
240	787	0.022		0		0
245	804	0.021		0		0
250	820	0.020		0		0
255	836	0.020		0		0
260	853	0.019		0		0
265	869	0.018		0		0
270	886	0.018		0		0
275	902	0.017	34.425	0.593745257	1.3377	0.023071983
280	918	0.017		0		0
285	935	0.016		0		0
290	951	0.016		0		0
295	968	0.015		0		0
300	984	0.015		0		0

APPENDIX D:
ARBORIST REPORT AND TREE REMOVAL PLAN

Preliminary Arborist Report

The Oaks Shopping Center
Cupertino, CA

Prepared for:
KT Urban
21710 Stevens Creek Boulevard
Cupertino, CA 95014

Prepared by:
HortScience, Inc.
325 Ray Street
Pleasanton CA 94566

July 2018

Preliminary Arborist Report

The Oaks Shopping Center, Cupertino CA

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List of Tables

Exhibits

Introduction and Overview

KT Urban is proposing to redevelop the Oaks Shopping Center, located at the corners of Mary Ave. and Stevens Creek Blvd., in Cupertino, California. Currently, the site contains retail business, restaurants, a theater, parking lots and associated landscaping. The project proposes construction of a mixed-use development, including townhomes, row houses and residential/retail built above a subterranean garage. HortScience, Inc. was asked to prepare an **Arborist Report** for the project for review by the City of Cupertino.

This report provides the following information:

1. An assessment of the health and structural condition of those trees within and immediately adjacent to the project site.

2. Identification of all *Protected* trees as defined by the City of Cupertino Ordinance #07-2003, Ch. 14.18.

3. An assessment of the impacts of constructing the proposed project on the trees.

4. Guidelines for tree preservation during the design, construction and maintenance phases of development.

Assessment Methods

Trees were assessed on May 9, 2018. The assessment included all trees 6” and greater in diameter. The survey procedure consisted of the following steps:

1. Tagging each tree with a numerically coded metal tag.
2. Identifying the tree as to species;
3. Measuring the trunk diameter at a point 54” above grade;
4. Evaluating the health and structural condition using a scale of 1 – 5:
   - ***5*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
   - ***4*** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
   - ***3*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
   - ***2*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
   - ***1*** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as “high”, “moderate” or “low”. Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

High:	Trees with good health and structural stability that have the potential for longevity at the site.
Moderate:	Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in ‘high’ category.
Low:	Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

Eighty-three (83) trees were evaluated, representing 11 species (Table 1, page 4). Trees #28, 43, 44 and 69 had been removed since we assessed the trees in March of 2015. Descriptions of each tree are found in the ***Tree Assessment Forms***, and locations are shown on the ***Tree Assessment Map*** (see attachments).

The site is an aging shopping center with a mix of young trees planted throughout the parking lots, semi-mature trees along the perimeters and four (4) veteran oak trees likely preserved during the last site development. Veteran oaks may be indigenous to the site, but the remaining trees were planted exotics.

Twenty-four (24) Chinese pistache and 24 evergreen ash were assessed at the site and represented the two most frequently occurring species. Chinese pistache were located in the parking lot islands on the east (#11-14), north (#45-57) and south (#70-76) sides of the buildings. The trees were all young, with diameters between 5" and 11". Condition was poor (18 trees) to fair (6 trees) as a result of the topping that compromised the structure of the trees (**Photo 1**).

Photo 1: Looking east at Chinese pistache #76. The tree was young, at 5" in diameter and in poor condition. It had been topped and the branches reduced to stubs. This was the typical treatment of all Chinese pistache at the site.

Evergreen ash were located along the Mary Ave. frontage (#25, 26, 31, 32, and 58-64), the west side of the building (#33-40) and the Stevens Creek Blvd. frontage (#78-85). Diameters ranged from 12" to 34" with 6 young trees (12-18" in diameter), 9 semi-mature (19-24") and 9 mature trees (25-34"). Some of the evergreen ash had ben topped, others had been root pruned to repair adjacent infrastructure. Twelve (12) were in fair condition, 6 were in good and 6 were in poor.

Coast live oak, with 18 trees, was also well represented. The species was concentrated on the west half of the site and included a range of age classes. There were 6 young trees (5-11" in diameter), 6 semi-mature (12-24"), 3 mature (24-36"), and 3 over-mature trees (36-50"). In general, they were in fair condition (10 trees), with 5 in good and 3 in poor. The over-mature trees were all in fair condition. These trees had seen many years of maintenance, producing large pruning wounds, cavities filled with concrete and non-industry standard cabling (**Photo 2**, following page). Coast live oaks in good condition included 3 young trees (5, 15 and 87), semi-mature coast live oak #16 and mature coast live oak #30. Coast live oaks #17, 19 and 77 were in poor condition; #17 leaned heavily north, and #19 and 77 had extensive dieback.

Photo 2: Looking east at coast live oak #19. The tree was mature, at 29” in diameter. It was in poor condition, with extensive dieback in the crown. Non-industry standard cables had been installed.

The remaining 10 species were represented by 3 or fewer individuals and included:

- Three (3) young crape myrtles, all in good condition and with slightly thin crowns. Trees #81 and 82 were located along Stevens Creek Blvd. and were in excellent condition. Tree #29 had been planted in an interior courtyard between the buildings.
- Three (3) Nichol’s gum eucalyptus were growing along the west side of the property, adjacent to the freeway on-ramp. These were semi-mature and in good (#65 and 66) and poor (#67) condition.
- Two (2) mature callery pears. These were located on Mary Ave. and were in fair (#10) and poor (#9) condition.
- Two (2) young to semi-mature evergeen pears. These were located on the west side of the building and were in good (#41) and fair (#42) condition.
- Two (2) Victorian box. Both had been planted in interior courtyards between the buildings. Tree #20 was in poor condition and #27 was in fair condition.
- Mature Monterey pine #24 was located on Stevens Creek Blvd. It was in decline and in poor condition.
- One (1) holly oak, 1 Canary Island pine, 1 deodar cedar and 1 Japanese maple. The holly oak was semi-mature and in poor condition; the Canary Island pine and deodar cedar were new plantings and the Canary Island pine was not performing well but the deodar cedar was; and the Japanese maple was a courtyard tree in good condition.

The City of Cupertino defines certain species with a diameter of 10" for single-trunked trees, and 20" for multi-trunked trees, as *Protected*. Based on this definition, 15 of the coast live oaks qualified as *Protected*. *Protected* trees are identified in the ***Tree Assessment Forms*** (see Exhibits).

Table 1: Condition ratings and frequency of occurrence of trees.
The Oaks Shopping Center, Cupertino

Common name	**Scientific name**	**Condition**			
		Poor (1-2)	**Fair (3)**	**Good (4-5)**	**Total**
Japanese maple	*Acer palmatum*	-	-	1	1
Deodar cedar	*Cedrus deodara*	-	-	1	1
Nichol's gum	*Eucalyptus nicholii*	1	-	2	3
Evergreen ash	*Fraxinus uhdei*	6	12	6	24
Crape myrtle	*Lagerstroemia indica*	-	-	3	3
Canary Island pine	*Pinus canariensis*	-	1	-	1
Monterey pine	*Pinus radiata*	1	-	-	1
Chinese pistache	*Pistacia chinensis*	18	6	-	24
Victorian box	*Pittosporum undulatum*	1	1	-	2
Callery pear	*Pyrus calleryana*	1	1	-	2
Evergreen pear	*Pyrus kawakamii*	-	1	1	2
Coast live oak	*Quercus agrifolia*	3	10	5	18
Holly oak	*Quercus ilex*	-	1	-	1
Total		**31**	**33**	**19**	**83**
		37%	40%	23%	100%

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields or creek channels, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. Coast live oak #17 is an example of such a tree.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, Monterey pine is intolerant of root loss and evergreen ash and coast live oak are tolerant of root loss.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

- **Species invasiveness**
  Species which spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/) lists species identified as being invasive. Cupertino is part of the Central West Floristic Province. None of the species present at The Oaks Shopping Center are considered invasive.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment. Table 2 provides a summary of the suitability ratings. Suitability ratings for individual trees are included in the ***Tree Assessment Form*** (see attachments).

Table 2: Tree Suitability for Preservation
The Oaks Shopping Center, Cupertino

High	These are trees with good health and structural stability that have the potential for longevity at the site. Seven (7) trees were highly suitable for preservation; including 3 crape myrtles, 2 Nichol’s gum, deodar cedar #86 and coast live oak #87.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the “high” category. Thirty-four (34) trees were of moderate suitability for preservation, including 14 evergreen ash, 13 coast live oaks, 2 evergreen pears, 2 Chinese pistache, and one (1) each of Victorian box, Japanese maple and Canary Island pine.
Low	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Forty-two (42) trees had low suitability for preservation, including 22 Chinese pistache, 10 evergreen ash, 4 coast live oaks, 2 callery pears and one (1) each of Monterey pine, holly oak, Victorian box and Nichol’s gum.

Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment Form*** was the reference point for tree condition and quality. Potential impacts from construction were evaluated using the Grading and Drainage Plan (Sheet VTM-3) prepared Kimley Horn and Associates, Inc. (dated July 13th, 2018).

The plan proposes to construct a mix of row houses along the western boundary, with townhomes occupying the central portion of the site and apartment units above retail with a subterranean garage on the east side. New roads, plazas, parking and entry points onto Mary Ave. would be constructed across the site, connecting the new amenities.

The plan was preliminary in nature. Grading for buildings, roads, plazas and driveways were shown on the plans. Utilities and accurate tree locations were not depicted on the plans. As such, the following recommendations for tree removal and preservation must be considered preliminary as well.

Potential impacts from construction were estimated for each tree. The most significant impacts to the trees would occur as a result of the grading of the central portion of the site and excavation for the subterranean garage. The current design leaves limited space for tree preservation.

Based on my evaluation of the plans and associated impacts on the trees, 74 trees fall within grading for the row-houses, townhomes, subterranean garage, entries and City required right-of-way improvements along Steven's Creek Blvd., requiring their removal. Of the trees identified for removal, 42 had low suitability for preservation and 14 qualified as *Protected*. Table 3, following page, provides the recommended action for each tree, along with their *Protected* status and a description of impacts.

Nine (9) trees have been preliminarily identified for preservation, including *Protected* tree #68. Once the plans have been finalized and trunks have been located and plotted on plans, a final determination of if these trees can be preserved must be made by the Consulting Arborist. Preservation is predicated on establishing a **Tree Protection Zone** and other recommendations listed in the ***Tree Preservation Guidelines*** (page 9).

Trees identified for preservation are located on the perimeter of the site as follows:

- Trees #59-64 are proposed for preservation in the northeast corner of the site. The northwest corner is proposed as a park, with limited grading for pathways and amenities. Minimizing grading within the dripline of the trees, designing features to avoid impacts to trees, careful demolition of the existing infrastructure and root pruning will all be required if they are to be successfully preserved.

- Trees 65, 66 and 68 are proposed for preservation along the western boundary. These trees may in fact be off-site on the Caltrans right-of-way. They appear to be within the proposed set-backs in this area but may still be impacted by grading and drainage. Again, minimizing grading within the dripline of the trees, designing features to avoid impacts to trees, careful demolition of the existing infrastructure and root pruning will all be required if they are to be successfully preserved.

Table 3: Recommendations for Action
The Oaks Shopping Center, Cupertino

Tree #	Species	Trunk Diameter (in)	Protected?	Impact
1	Coast live oak	39	Yes	Remove, within garage footprint
2	Coast live oak	16	Yes	Remove, within garage footprint
3	Coast live oak	21	Yes	Remove, impacted by drainage
4	Coast live oak	51	Yes	Remove, within parking lot
5	Coast live oak	11	Yes	Remove, within garage footprint
6	Coast live oak	34	Yes	Remove, within garage footprint
7	Coast live oak	15	Yes	Remove, within garage footprint
8	Coast live oak	22	Yes	Remove, within garage footprint
9	Callery pear	15	No	Remove, low suitability
10	Callery pear	17	No	Remove, low suitability
11	Chinese pistache	9	No	Remove, low suitability
12	Chinese pistache	10	No	Remove, low suitability
13	Chinese pistache	10	No	Remove, low suitability
14	Chinese pistache	7	No	Remove, low suitability
15	Coast live oak	7	No	Remove, within garage footprint
16	Coast live oak	23	Yes	Remove, within garage footprint
17	Coast live oak	13	Yes	Remove, low suitability
18	Coast live oak	49	Yes	Remove, low suitability
19	Coast live oak	29	Yes	Remove, low suitability
20	Victorian box	8,6,5,5	No	Remove, low suitability
21	Japanese maple	10,9,9	No	Remove, within townhomes
22	Coast live oak	11,10,10	Yes	Remove, within townhomes
23	Canary island pine	7	No	Remove, within garage footprint
24	Monterey pine	23	No	Remove, low suitability
25	Evergreen ash	23	No	Remove, impacted by new entry
26	Evergreen ash	29	No	Remove, impacted by new entry
27	Victorian box	10,10,8	No	Remove, within townhomes
29	Crape myrtle	5,5,4,3,3,2	No	Remove, within townhomes
30	Coast live oak	28,21	Yes	Remove, within townhomes
31	Evergreen ash	34	No	Remove, within townhomes
32	Evergreen ash	20	No	Remove, low suitability
33	Evergreen ash	25	No	Remove, low suitability
34	Evergreen ash	12	No	Remove, low suitability
35	Evergreen ash	22	No	Remove, low suitability
36	Evergreen ash	16	No	Remove, low suitability
37	Evergreen ash	16	No	Remove, low suitability
38	Holly oak	15	No	Remove, low suitability
40	Evergreen ash	21	No	Remove, low suitability
41	Evergreen pear	13	No	Remove, within townhomes
42	Evergreen pear	9	No	Remove, within townhomes
45	Chinese pistache	8	No	Remove, low suitability
46	Chinese pistache	8	No	Remove, low suitability

(**Continued, following page**)

Table 3: Recommendations for Action, continued
The Oaks Shopping Center, Cupertino

Tree #	Species	Trunk Diameter (in)	Protected?	Impact
47	Chinese pistache	9	No	Remove, low suitability
48	Chinese pistache	7	No	Remove, low suitability
49	Chinese pistache	7	No	Remove, low suitability
50	Chinese pistache	6	No	Remove, low suitability
51	Chinese pistache	5	No	Remove, low suitability
52	Chinese pistache	8	No	Remove, low suitability
53	Chinese pistache	10	No	Remove, low suitability
54	Chinese pistache	9	No	Remove, low suitability
55	Chinese pistache	10	No	Remove, low suitability
56	Chinese pistache	7	No	Remove, low suitability
57	Chinese pistache	6	No	Remove, low suitability
58	Evergreen ash	27	No	Remove, low suitability
59	Evergreen ash	26	No	**Preserve?**
60	Evergreen ash	23	No	**Preserve?**
61	Evergreen ash	14	No	**Preserve?**
62	Evergreen ash	18	No	**Preserve?**
63	Evergreen ash	20	No	**Preserve?**
64	Evergreen ash	18	No	**Preserve?**
65	Nichol's gum	23	No	**Preserve?**
66	Nichol's gum	22	No	**Preserve?**
67	Nichol's gum	17	No	Remove, low suitability
68	Coast live oak	11	Yes	**Preserve?**
70	Chinese pistache	8	No	Remove, low suitability
71	Chinese pistache	9	No	Remove, within townhomes
72	Chinese pistache	7	No	Remove, low suitability
73	Chinese pistache	11	No	Remove, within townhomes
74	Chinese pistache	9	No	Remove, low suitability
75	Chinese pistache	7	No	Remove, low suitability
76	Chinese pistache	5	No	Remove, low suitability
77	Coast live oak	5	No	Remove, low suitability
78	Evergreen ash	19	No	Remove, low suitability
79	Evergreen ash	28	No	Remove, within City req'd. improvements
80	Evergreen ash	26	No	Remove, within City req'd. improvements
81	Crape myrtle	6	No	Remove, within City req'd. improvements
82	Crape myrtle	5	No	Remove, within City req'd. improvements
83	Evergreen ash	24	No	Remove, within City req'd. improvements
84	Evergreen ash	30	No	Remove, within City req'd. improvements
85	Evergreen ash	25	No	Remove, low suitability
86	Deodar cedar	7	No	Remove, within garage footprint
87	Coast live oak	5	No	Remove, within garage footprint

Preliminary Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

1. Have the vertical and horizontal locations of all the trees identified for preservation established and plotted on all plans. Forward these plans to the Consulting Arborist for review and comment.

2. All plans affecting trees shall be reviewed by the Consulting arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading and utility plans, landscape and irrigation plans.

3. A **TREE PROTECTION ZONE** must be established for trees to be preserved, in which no disturbance is permitted. **TREE PROTECTION ZONES** for trees identified for preservation are identified in the following table. For design purposes, the **TREE PROTECTION ZONE** shall be established at the dripline in all directions. No grading, excavation, construction or storage of materials shall occur within that zone.

4. Underground services including utilities, sub-drains, water or sewer shall be routed around the **TREE PROTECTION ZONE**. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.

5. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.

6. No underground services including utilities, sub-drains, water or sewer shall be placed in the **TREE PROTECTION ZONE**.

7. **Tree Preservation Notes**, prepared by the Consulting Arborist, should be included on all plans.

8. Do not lime within 50’ of any tree. Lime is toxic to tree roots.

9. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

10. Irrigation systems must be designed so that no trenching will occur not within the **TREE PROTECTION ZONE**.

Pre-construction treatments and recommendations

1. The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

2. Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by Consulting Arborist. Fences are to remain until all grading and construction is completed.

3. Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).

4. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.

5. Have brush from the pruning and removal operations chipped and spread beneath the trees within the **TREE PROTECTION ZONE**. Mulch shall be 2” to 4” in depth and kept a minimum of 3’ from the base of the trees.

Recommendations for tree protection during construction

1. Prior to beginning work, the contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.

2. No grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.

3. Fences have been erected to protect trees to be preserved. Fences define a specific **TREE PROTECTION ZONE** for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consultant.

4. Construction trailers, traffic and storage areas must remain outside fenced areas at all times.

5. Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the **TREE PROTECTION ZONE.** Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Consulting Arborist.

6. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

7. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.

8. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of impacted trees

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

HortScience, Inc.

John Leffingwell
Board Certified Master Arborist WE-3966B
Registered Consulting Arborist #442

Attached: ***Tree Assessment Form***

Tree Assessment Map

Tree Assessment

The Oaks Shopping Center
Cupertino, California
March 2015

TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
1	Coast live oak	39	Yes	3	Moderate	Multiple attachments at 10'; borer damage; thinning canopy; cabled.
2	Coast live oak	16	Yes	3	Moderate	Twig dieback; sunscald SE; borer damage.
3	Coast live oak	21	Yes	3	Moderate	Twig dieback; thinning canopy.
4	Coast live oak	51	Yes	3	Moderate	Multiple attachments at 10'; several cavities filled with concrete; trunk sounds hollow; non-standard cabling; pruned hard NW; good vigor.
5	Coast live oak	11	Yes	4	Moderate	Codominant trunks at 8'; included bark; full crown.
6	Coast live oak	34	Yes	3	Moderate	Multiple attachments at 10'; heavy lateral N.; cables; borer damage; pruned hard; central leader bows N.; good vigor.
7	Coast live oak	15	Yes	3	Moderate	Multiple attachments at 4'; good form; minor twig dieback.
8	Coast live oak	22	Yes	3	Moderate	Low lateral S. at 5'; good vigor; twig dieback; decay in cavity on N.; branch failure on S.; reduce low lateral over parking.
9	Callery pear	15	No	2	Low	Multiple attachments at 5'; poor branch attachments; displacing infrastructure; thin crown with twig dieback.
10	Callery pear	17	No	3	Low	Codominant trunks at 8' with included bark; history of branch failure.
11	Chinese pistache	9	No	3	Low	Multiple attachments at 8'; topped at 15'; epicormics; thin crown.
12	Chinese pistache	10	No	2	Low	Multiple attachments at 8'; topped at 15'; epicormics' very thin crown.
13	Chinese pistache	10	No	3	Low	Multiple attachments at 8'; topped at 15'; epicormics.
14	Chinese pistache	7	No	2	Low	Small, thin crown; topped at 15'; epicormics.

TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
15	Coast live oak	7	No	4	Moderate	Good young tree; a little one sided W.; recently pruned; crown lifted to 6'; codominant at 7'.
16	Coast live oak	23	Yes	4	Moderate	Multiple attachments at 10'; dieback in lower crown; sunscald; recently pruned.
17	Coast live oak	13	Yes	2	Low	Multiple attachments at 8'; heavy lean NE.; basal wound on compression side; recently pruned; bleeding on S. side on lower trunk.
18	Coast live oak	49	Yes	3	Low	Multiple attachments at 15'; decay in old pruning wounds; many cables in crown; heavy lateral W. over building; dieback in upper canopy; good vigor.
19	Coast live oak	29	Yes	2	Low	Multiple attachments at 12'; cables in crown; extensive dieback; thin crown; base of trunk flat on S.
20	Victorian box	8,6,5,5	No	2	Low	Multiple attachments at 3'; sunscald; extensive dieback.
21	Japanese maple	10,9,9	No	4	Moderate	Multiple attachments at 1'; one sided N.; old topping points; full, dense crown.
22	Coast live oak	11,10,10	Yes	3	Moderate	Multiple attachments at 2'; crown lifted to 8'; sunscald; dieback.
23	Canary island pine	7	No	3	Moderate	Poor color; codominants at 10'.
24	Monterey pine	23	No	2	Low	One sided E.; suppressed by tree #25; dieback.
25	Evergreen ash	23	No	3	Moderate	Multiple attachments at 12'; good form; minor dieback; displacing sidewalk and curb; good vigor; prune to reduce weight.
26	Evergreen ash	29	No	4	Moderate	Multiple attachments at 10'; good form; laterals N.; dieback; in 7' wide planter; extensive surface roots; prune to reduce weight.

TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
27	Victorian box	10,10,8	No	3	Moderate	Multiple attachments at 3'; upright form; moderate dieback; in raised planter.
28	Removed					
29	Crape myrtle	5,5,4,3,3,2	No	4	High	Multiple attachments at base; upright; minor trunk
30	Coast live oak	28,21	Yes	4	Moderate	Codominant trunks at 2'; lateral NW.; twig dieback; full, dense crown.
31	Evergreen ash	34	No	4	Moderate	Multiple attachments at 10' with narrow attachments; new ramp on E.; full, dense crown.
32	Evergreen ash	20	No	2	Low	Codominant trunks at 10'; narrow form; old topping points; extensive dieback; poor color.
33	Evergreen ash	25	No	3	Low	Multiple attachments at 8'; heavily root pruned N.; extensive dieback; base of tree roots shaved at sidewalk edge; in 7' wide planter.
34	Evergreen ash	12	No	2	Low	Dead root S.; twig and branch dieback in upper crown; sunscald.
35	Evergreen ash	22	No	2	Low	Multiple attachments at 10'; narrow form; root pruned; extnesive dieback; one central upright stem removed.
36	Evergreen ash	16	No	2	Low	Multiple attachments at 8'; poor form and structure; extensive dieback.
37	Evergreen ash	16	No	2	Low	Multiple attachments at 10'; poor form and structure; extensive dieback in upper crown; displacing sidewalk.
38	Holly oak	15	No	3	Low	Multiple attachments at 10'; trunk wounds; minor dieback.
39	Evergreen ash	20	No	3	Low	Codominant trunks at 8'; one sided N.; dead branches to 6".

TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
40	Evergreen ash	21	No	4	Moderate	Multiple attachments at 15'; one sided S.; minor dieback.
41	Evergreen pear	13	No	4	Moderate	Multiple attachments at 7'; one sided & lateral N.; good form and structure.
42	Evergreen pear	9	No	3	Moderate	Small crown; one sided S.
43	Removed					
44	Removed					
45	Chinese pistache	8	No	1	Low	Multiple attachments at 8'; topped at 10'; epicormics;
46	Chinese pistache	8	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.
47	Chinese pistache	9	No	1	Low	Multiple attachments at 8'; topped at 10'; epicormics;
48	Chinese pistache	7	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.
49	Chinese pistache	7	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.
50	Chinese pistache	6	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.
51	Chinese pistache	5	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.
52	Chinese pistache	8	No	1	Low	Multiple attachments at 8'; topped at 12';
53	Chinese pistache	10	No	1	Low	Multiple attachments at 8'; topped at 12'; epicormics;
54	Chinese pistache	9	No	1	Low	Multiple attachments at 10'; topped at 15'; epicormics;
55	Chinese pistache	10	No	1	Low	Multiple attachments at 8'; topped at 12'; epicormics;
56	Chinese pistache	7	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.

TREE No.	SPECIES	SIZE DIAMETER (in inches)	PROTECTED	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
57	Chinese pistache	6	No	1	Low	Small crown; topped at 12'; epicormics; pruned hard; little live foliage.
58	Evergreen ash	27	No	3	Low	Multiple attachments at 10'; extensive dieback; in 7' wide planter.
59	Evergreen ash	26	No	4	Moderate	Multiple attachments at 10'; good form and structure; minor dieback; slightly thin.
60	Evergreen ash	23	No	3	Moderate	Multiple attachments at 10'; old topping points; moderate dieback; displacing curb and asphalt.
61	Evergreen ash	14	No	3	Moderate	Multiple attachments at 10'; crowded; crown bowed S.; minor dieback.
62	Evergreen ash	18	No	3	Moderate	Codominant trunks at 10'; upright, narrow crown; dieback.
63	Evergreen ash	20	No	3	Moderate	Codominant trunks at 10'; one sided E.; moderate dieback.
64	Evergreen ash	18	No	3	Moderate	Multiple attachments at 10'; one sided SW.; moderate dieback.
65	Nichol's gum	23	No	4	High	Good form and structure; a little thin in upper canopy;
66	Nichol's gum	22	No	4	High	Lateral at 8'; good upright form.
67	Nichol's gum	17	No	2	Low	Lateral at 5'; very thin canopy.
68	Coast live oak	11	Yes	3	Moderate	Good young tree; one sided E.; pruned hard to E.; fence embedded at base.
69	Removed					
70	Chinese pistache	8	No	2	Low	Multiple attachments at 8'; topped at 15'; epicormics;
71	Chinese pistache	9	No	3	Moderate	Codominant at 7'; topped at 15'; epicormics; okay form;
72	Chinese pistache	7	No	2	Low	Multiple attachments at 8'; topped at 15'; epicormics;

TREE No.	**SPECIES**	**SIZE** DIAMETER (in inches)	**PROTECTED**	**CONDITION** 1=POOR 5=EXCELLENT	**SUITABILITY FOR PRESERVATION**	**COMMENTS**
73	Chinese pistache	11	No	3	Moderate	Multiple attachments at 8'; topped at 15' but left laterals; epicormics; minor dieback.
74	Chinese pistache	9	No	3	Low	Multiple attachments at 8'; topped at 15' but left laterals; epicormics; thin crown.
75	Chinese pistache	7	No	3	Low	Multiple attachments at 8'; topped at 15' but left laterals; epicormics; thin crown.
76	Chinese pistache	5	No	2	Low	Multiple attachments at 7'; pruned hard; thin crown.
77	Coast live oak	5	No	2	Low	Surrounded by lawn; thin canopy; replaced tree?; extensive dieback.
78	Evergreen ash	19	No	3	Low	Codominant trunks at 10'; narrow attachment; dead branches to 5"; epicormics; minor dieback.
79	Evergreen ash	28	No	4	Moderate	Multiple attachments at 10'; slightly thin; minor dieback; cut small girdling roots.
80	Evergreen ash	26	No	4	Moderate	Codominant trunks at 10'; upright, narrow form; dieback; recently pruned.
81	Crape myrtle	6	No	4	High	Multiple attachments at 6'; good young tree; slightly thin.
82	Crape myrtle	5	No	4	High	Multiple attachments at 6'; good young tree; slightly thin.
83	Evergreen ash	24	No	3	Moderate	Codominant trunks at 10'; upright, narrow form; high crown.
84	Evergreen ash	30	No	3	Moderate	Multiple attachments at 10'; slight lean S.; displacing infrastructure N.; dead branches to 2"; recently pruned.
85	Evergreen ash	25	No	2	Low	Codominant trunks at 10'; trunk wound & decay; dead branches to 4"; cabled; codominant stems fused together at 4'.

TREE No.	**SPECIES**	**SIZE** DIAMETER (in inches)	**PROTECTED**	**CONDITION** 1=POOR 5=EXCELLENT	**SUITABILITY FOR PRESERVATION**	**COMMENTS**
86	Deodar cedar	7	No	4	High	Good young tree, crown lifted to 8'.
87	Coast live oak	5	No	4	High	Good young tree, multiple attachments at 6'; full crown.

Tree Assessment Plan

The Oaks
Cupertino, CA

Prepared for:
KT Urban
Cupertino, CA

May 2018

N

No Scale

Notes:
Base map provided by:
Charles W. Davidson
San Jose, CA

Numbered tree locations are approximate.

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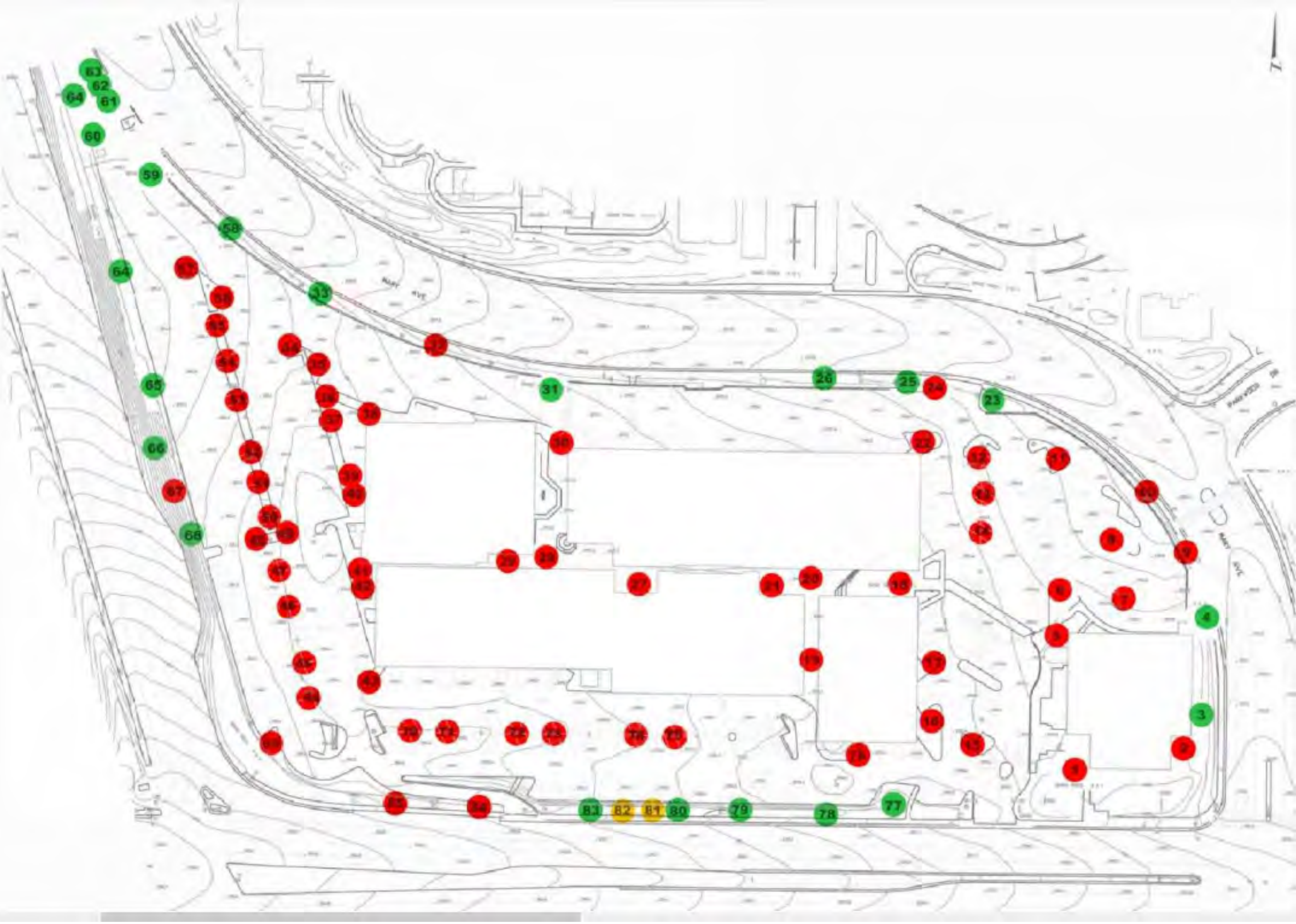
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APPENDIX E:
GREENHOUSE GAS EMISSIONS ASSESSMENT

Greenhouse Gas Emissions Assessment for the proposed Westport Project in the City of Cupertino, California

Prepared by:

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July 2019

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LIST OF ABBREVIATED TERMS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
CAP	Climate Action Plan
CARB	California Air Resources Board
CFCs	Chlorofluorocarbons
CH_4	methane
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
EPA	Environmental Protection Agency
GHG	greenhouse gas
HFCs	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
MMT	million metric tons
MTC	Metropolitan Transportation Commission
MWh	megawatt-hour
N_2O	nitrous oxide
NHTSA	National Highway Traffic Safety Administration
PFCs	Perfluorocarbons
RHNA	Regional Housing Allocation Needs Allocation
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SP	service population
VMT	vehicle miles traveled

1 INTRODUCTION

This report evaluates greenhouse gas (GHG) emissions associated with the proposed Westport Project and analyzes project compliance with applicable regulations. The project's consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of GHGs, is analyzed in this report.

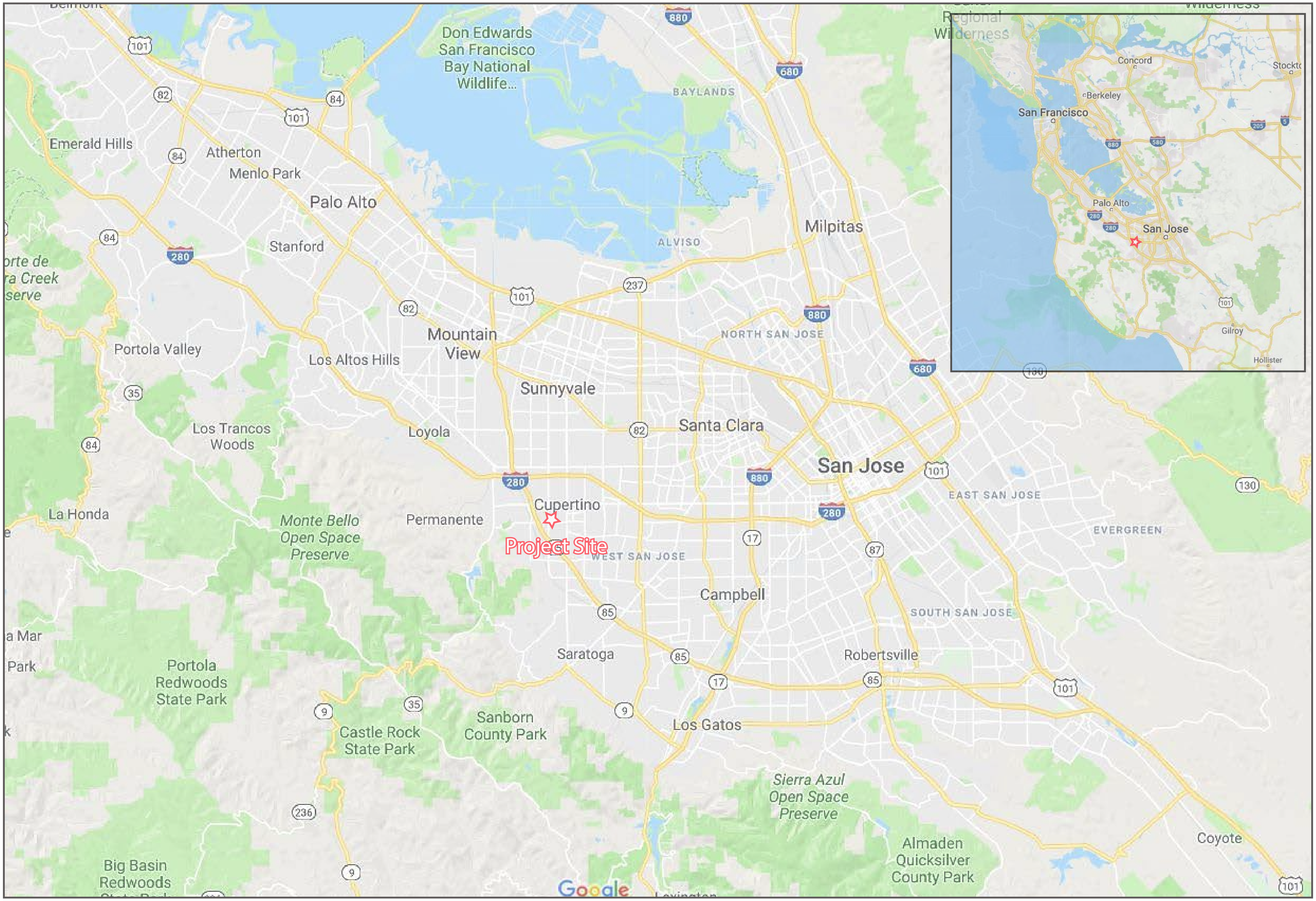
1.1 PROJECT LOCATION

The project site is located in the City of Cupertino, California within the Heart of the City Specific Plan area and is designated as a Priority Housing Site (HE-3) in the adopted Housing Element; refer to Exhibit 1. The project is located adjacent to SR-85 and Stevens Creek Boulevard; refer to Exhibit 2.

1.2 PROJECT DESCRIPTION

The proposed project is the redevelopment of 71,254 square-feet of shopping center on an 8.1-acre site to provide mixed-use urban village with 242 residential units and 20,000 square-feet of retail space. The project would have a six-story building with 115 residential units and 17,700 square-feet of ground-floor retail, a five-story building with 39 senior units and 2,300 ground-floor retail, 69 residential townhouses, and 19 residential rowhouses. The proposed project includes a one story- belowground garage with 232 parking spaces, 117 surface parking spaces, and 176 private garage units. The proposed project includes 20 separate buildings. The maximum building height would be 70 feet. The townhouses and rowhomes have attached garages, while the mixed-use buildings use the parking garage or surface parking.

In the Heart of the City Specific Plan the project site is designated as Oaks Gateway, a Mixed Use Planned Development (General Commercial) [P(CG)]. The CG designation allows professional, general, administrative, business offices, dance and music studios, child care centers, as well as other uses that do not involve the direct retailing of goods or services to the general public. However, the mixed use allows residential located behind the primary uses and above the ground level.



Source: Kimley-Horn and Associates, 2018

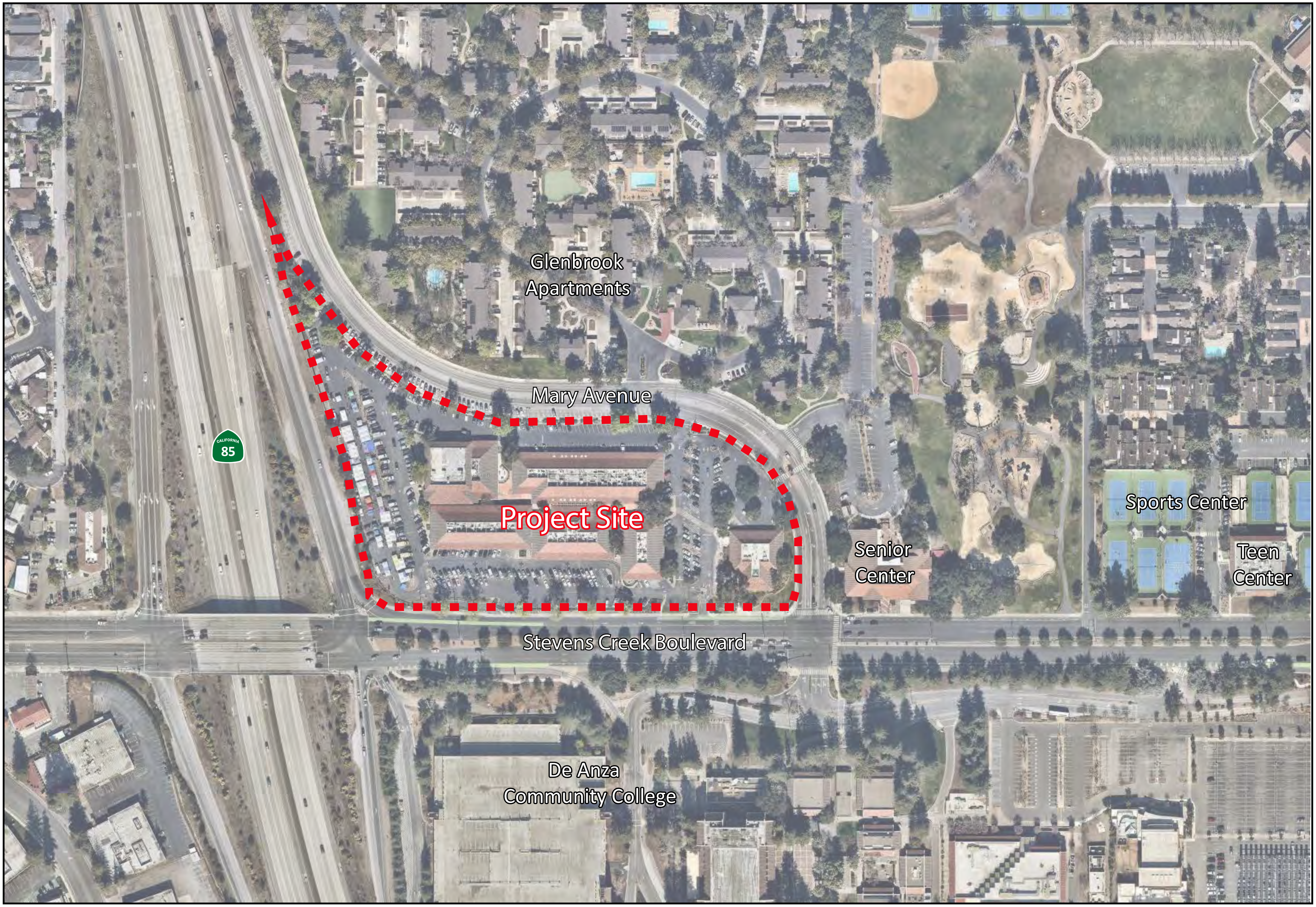
Figure 1: Regional Location Map

Westport Project

Not to scale

Kimley»Horn

Expect More. Experience Better.



Source: Kimley-Horn and Associates, 2018

Exhibit 2: Site Vicinity
Westport Project

Not to scale

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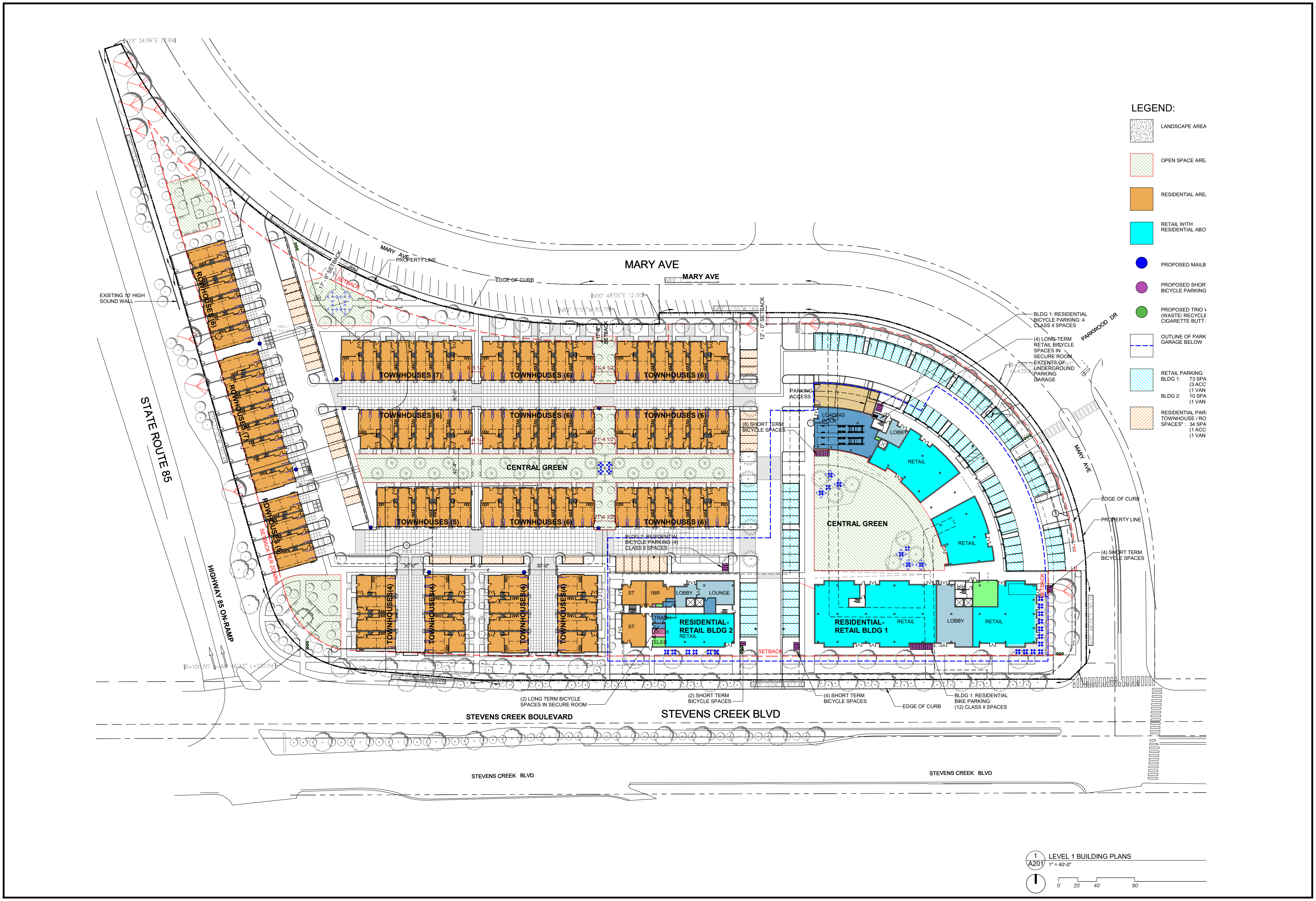

Source: C2K Architecture Inc., 2018

Exhibit 3: Site Plan

Westport Project

Not to scale

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2 ENVIRONMENTAL SETTING

2.1 GREENHOUSE GASES AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).[1] *Table 1, Description of Greenhouse Gases,* describes the primary GHGs attributed to global climate change, including their physical properties.

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[1] IPCC (Intergovernmental Panel on Climate Change). 2013. Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; IPCC *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 FEDERAL

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The U.S. EPA authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (carbon dioxide [CO_2], methane [CH_4], nitrous oxide [N_2O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the U.S. EPA's assessment of the scientific evidence that form the basis for the U.S. EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the U.S. EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum directing the Department of Transportation, Department of Energy, U.S. EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the U.S. EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the U.S. EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks. It should be noted that the U.S. EPA is currently proposing to freeze the vehicle fuel efficiency standards at their planned 2020 level (37 mpg), canceling any future strengthening (currently 54.5 mpg by 2026).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the U.S. EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the U.S. EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the U.S. EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the U.S. EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the U.S. EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, the federal government directed the U.S. EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13783. Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

3.2 STATE OF CALIFORNIA

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of carbon dioxide equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. In the State, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark AB 32 California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act). Assembly Bill (AB) 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan. CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual")[2]. The Scoping Plan evaluates opportunities for sector-specific reductions; integrates early actions by CARB and the State's Climate Action Team and additional GHG reduction measures by both entities; identifies additional measures to be pursued as regulations; and outlines the adopted role of a cap-and-trade program.[3] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard

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[2] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[3] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

(amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).

- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB 2008).

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e ($MMTCO_2e$) to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a second update to the Scoping Plan[4]. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and, support the Clean Power Plan and other Federal actions.

Senate Bill 32 (California Global Warming Solutions Act of 2006: emissions limit). Signed into law in September 2016, Senate Bill (SB) 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008). Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

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[4] California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed May 9, 2018.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards). California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the U.S. EPA's denial of an implementation waiver. The U.S. EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

SB 1368 (Emission Performance Standards). SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs. CO_2 per megawatt-hour (MWh).

SB 1078 and SBX1-2 (Renewable Electricity Standards). SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015). Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator (ISO) to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. The appliance efficiency regulations (California Code of Regulations Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards. California's Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and take effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

Title 24 California Green Building Standards Code. The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017.

3.3 REGIONAL

Bay Area Air Quality Management District

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

Under CEQA, the BAAQMD is a commenting responsible agency on air quality within its jurisdiction or impacting its jurisdiction. The BAAQMD reviews projects to ensure that they would: (1) support the primary goals of the latest Air Quality Plan; (2) include applicable control measures from the Air Quality Plan; and (3) not disrupt or hinder implementation of any Air Quality Plan control measures.

In May 2010, the BAAQMD adopted its updated *California Environmental Quality Act (CEQA) Air Quality Guidelines* as a guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA. The BAAQMD *CEQA Guidelines* include methodologies and thresholds for addressing project and program level air quality and GHG emissions. The Guidelines were called into question by an order issued March 5, 2012, in *California Building Industry Association (CBIA) v. BAAQMD* (Alameda Superior Court Case No. RGI0548693). The Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds. The court also issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD had complied with CEQA. Notably, the court's ruling was based solely on BAAQMD's failure to comply with CEQA. The court did not reach any issues relating to the validity of the scientific reasoning underlying the recommended significance thresholds.

In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds.[5] CBIA sought review by the California Supreme Court on three issues, including the appellate court's decision to uphold the BAAQMD's adoption of the thresholds, and the Court granted review on just one: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In December 2015, the California Supreme Court confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project.[6] The BAAQMD published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. The BAAQMD is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

Clean Air Plan

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard). The *2017 Clean Air Plan: Spare the Air, Cool the Climate* was adopted on April 19, 2019, by the BAAQMD.

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG) reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

3.4 LOCAL

City of Cupertino General Plan

The City of Cupertino General Plan "Community Vision 2015-2040" describes the community's overall philosophy regarding the character and accessibility of existing and new neighborhoods and mixed-use corridors. The City of Cupertino's vision is to be a balanced community with quiet and attractive residential neighborhoods; exemplary parks and schools; accessible open space areas, hillsides and creeks; and a

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[5] California Court of Appeal, First Appellate District, Case Nos. A135335 & A136212.

[6] *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 [No. S 213478]

vibrant, mixed-use "Heart of the City". The City will be safe, friendly, healthy, connected, walkable, bikeable and inclusive for all residents and workers.

Goal M-8: Promote policies to help achieve state, regional and local air quality and greenhouse gas emission reduction targets.

Policy M-8.1: Greenhouse Gas Emissions

> Promote transportation policies that help to reduce greenhouse gas emissions.

Policy M-8.2: Land Use

> Support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita Vehicle Miles Traveled (VMT), reducing impacts on the City's transportation network and maintaining the desired levels of service for all mode of transportation.

Policy M-8.5: Design of new developments

> Encourage new commercial developments to provide shared office facilities, cafeterias, daycare facilities, lunchrooms, showers, bicycle parking, home offices, shuttle buses to transit facilities and other amenities that encourage the use of transit, bicycling or walking as commute modes to work. Provide pedestrian pathways and orient buildings to the street to encourage pedestrian activity.

Policy M-8.6: Alternative Fuel Charging Stations

> Develop a city-wide strategy to encourage the construction of a network of public and private alternative fuel vehicle charging/ fueling stations.

Goal ES-1: Ensure a sustainable future for the city of Cupertino

Policy ES-1.1: Principles of Sustainability

> Incorporate the principles of sustainability into Cupertino's planning, infrastructure and development process in order to improve the environment, reduce greenhouse gas emissions and meet the needs of the community without compromising the needs of future generations.

Strategies:

ES-1.1.1: Climate Action Plan (CAP)

Adopt, implement and maintain a Climate Action Plan to attain greenhouse gas emission targets consistent with state law and regional requirements. This qualified greenhouse gas emissions reduction plan, by BAAQMD's definition, will allow for future project CEQA streamlining and will identify measures to:

- Reduce energy use through conservation and efficiency
- Reduce fossil fuel use through multi-modal and alternative transportation
- Maximize use of and, where feasible, install renewable energy resources
- Increase citywide water conservation and recycled water use
- Accelerate Resource Recovery through expanded recycling, composting, extended producer responsibility and procurement practices
- Promote and incentivize each of those efforts to maximize community participation and impacts
- Integrate multiple benefits of green infrastructure with climate resiliency and adaptation.

ES-1.1.2: CAP and Sustainability Strategies Implementation

Periodically review and report on the effectiveness of the measures outlined in the CAP and the strategies in this Element. Institutionalize sustainability by developing a methodology to ensure all environmental, social and lifecycle costs are considered in project, program, policy and budget decisions.

ES-1.1.3: Climate Adaptation and Resiliency

Conduct a climate vulnerability assessment and set preparedness goals and strategies to safeguard human health and community assets susceptible to the impacts of a changing climate (e.g., increased drought, wildfires, flooding). Incorporate these into all relevant plans, including the Emergency Preparedness Plan, Local Hazard Mitigation Plan, Dam Failure Plan, Climate Action Plan, Watershed Protection Plan, and Energy Assuredness Plan.

Policy ES-1.2: Regional Growth and Transportation Coordination

Coordinate with local and regional agencies to prepare updates to regional growth plans and strategies, including the Regional Housing Allocation Needs Allocation (RHNA), One Bay Area Plan, Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS).

Strategies:

ES-1.2.1: Local Plan Consistency with Regional Plans

Update and maintain local plans and strategies so they are consistent with One Bay Area Plan to qualify for State transportation and project CEQA streamlining.

City of Cupertino Climate Action Plan

The City of Cupertino's Climate Action Plan (CAP) was first published in January 2015. The City has since released a 2015 CAP Progress Report, 2015 GHG Inventory Update, 2016 CAP Progress Report, and 2017

CAP Progress Report. The CAP is a strategy to achieve 15 percent reduction in carbon emissions by the year 2020, 49 percent reduction by 2035, and 83 percent by 2050. The reduction measures proposed in the CAP build on inventory results and key opportunities prioritized by City staff, members from the community, and elected officials. The strategies in the CAP consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City of Cupertino will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. The standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

In April 2017, Silicon Valley Clean Energy began offering 100 percent carbon free electricity to all residents and businesses in the City of Cupertino. The City upgraded its municipal electricity accounts to all renewable energy. The City also put in effect a Mandatory Commercial Organics Ordinance that went into effect early 2016 for all businesses that generate three cubic yards or more of organic waste per week or generate a solid waste stream that is comprised of 25 percent or more organic food waste material. Cupertino City Council approved the updated 2016 Bicycle Transportation Plan and dedicated $2 million towards implementation.

City of Cupertino Municipal Code

Chapter 16.58, Green Building Ordinance, of the City's Municipal Code includes the CALGreen requirements with local amendments for projects in the City. As part of the City's Green Building Ordinance, the City of Cupertino requires new construction greater than 9 residential units or 25,000 square feet of non-residential development and greater to build to Leadership in Energy and Environmental Design (LEED) or alternative reference standards. The LEED construction and/or other types of equivalent green building verification systems typically require enhanced building energy efficiency, which reduces heating and cooling requirements of a building and therefore also reduces GHG emissions.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 GREENHOUSE GAS THRESHOLDS

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or**
- **Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.**

BAAQMD Thresholds

The BAAQMD's 2017 *CEQA Air Quality Guidelines* provide significance thresholds for project GHG emissions that are used by the City of Cupertino. If the BAAQMD thresholds are exceeded, a potentially significant impact could result. These thresholds are substantiated in the *Options and Justification Report* (dated October 2009) prepared by the BAAQMD. These recommendations represent the best available science on the subject of what constitutes a significant GHG effect on climate change for this project. BAAQMD's recommended thresholds are as follows:

- Compliance with a Qualified Climate Action Plan or
- Meet one of the following thresholds:
    - 1,100 MT CO_2e/year (yr); or
    - 4.6 $MTCO_2e$/service population (sp)/yr (residents and employees)

4.2 METHODOLOGY

The project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod). Details of the modeling assumptions and emission factors are provided in Appendix A, *Greenhouse Gas Emissions Data*. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule, and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The project's operations-related GHG emissions would be generated by vehicular traffic, area sources (e.g., landscaping maintenance, consumer products), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste.

5 POTENTIAL IMPACTS AND MITIGATION

Threshold 5.1 Would the project would generate greenhouse gas emissions, either directly or indirectly, that could have a significant impact on the environment?

The project would include direct and indirect GHG emissions. Direct operational-related GHG emissions for the proposed project would include emissions from area and mobile sources, while indirect emissions are from energy consumption, water demand, and solid waste.

Construction Emissions

Construction of the project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment and the transport of materials and construction workers to and from the project site. Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.[7] BAAQMD does not have a threshold for construction GHG emissions. However, the BAAQMD advises that construction GHG should be disclosed and a determination on the significance of construction GHG emissions in relation to meeting AB 32 GHG reduction goals should be made. Total GHG emissions generated during all phases of construction were combined and are presented in Table 2, *Project Greenhouse Gas Emissions*. The CalEEMod outputs are contained within the Appendix A, *Greenhouse Gas Emissions Data*. As shown in Table 2, the project construction would result in 1,730 $MTCO_2e$ (58 $MTCO_2e$ per year when amortized over 30 years) and would not exceed BAAQMD's threshold of 1,100 million metric tons of carbon dioxide equivalent per year ($MTCO_2e$ per year). Construction emissions would be less than significant and no mitigation measures would be required.

Table 2: Project Greenhouse Gas Emissions

Category	Project ($MTCO_2e$)[1]	Percent Total[2]
CONSTRUCTION EMISSIONS		
Total Mitigated Construction Emissions (2019-2020)	1,730.18	N/A
30- Year Amortized Construction	57.67	N/A
OPERATIONAL EMISSIONS		
Existing		
Area	0.0014	0%
Energy	232	16%
On-Road Mobile Sources[4]	1,214	82%
Waste	19	1%
Water/Wastewater	19	1%
Total	**1,484**	**100%**
Proposed Project		
Area[5]	8	0%
Energy	648	35%

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[7] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 2: Project Greenhouse Gas Emissions

Category	Project ($MTCO_2e$)[1]	Percent Total[2]
On-Road Mobile Sources[4]	1,102	60%
Waste[6]	33	2%
Water/Wastewater	51	3%
Total	**1,843**	**100%**
Net Change		
Area	8	--
Energy	416	--
On-Road Mobile Sources	-112	--
Waste	14	--
Water/Wastewater	32	--
Total	**359**	**--**
BAAQMD Bright-Line Threshold	**1,100 $MTCO_2e$/year**	**--**
Exceeds BAAQMD Thresholds?	**No**	

Notes:
1. Emissions were calculated using CalEEMod.
2. Emissions may not total to 100 percent due to rounding.
3. Construction emissions are provided for informational purposes. The BAAQMD does not have construction GHG thresholds.
4. The mobile emissions modeled CalEEMod emissions are based on the project total daily trip generation of 2,174 vehicles. Credit for internal trip capture and proximity to transit was applied in the CalEEMod mitigation module (i.e., land use and site enhancement, increase density, and increase diversity). These measures were applied in accordance with the criteria within the California Air Pollution Control Officers Association (CAPCOA), *Quantifying Greenhouse Gas Mitigation Measures* (2010) guidance, and the CalEEMod User's Guide.
5. The area source emissions include compliance with BAAQMD Regulation 6, Rule 3 (Wood Burning Devices) and were applied in the mitigation tab of CalEEMod.
6. The waste source emissions include compliance with AB 939 requiring 50 percent diversion of the solid waste stream.

Source: Kimley-Horn and Associates, 2018; refer to Appendix A.

Operational Emissions

Operational or long-term emissions occur over the life of the proposed project. GHG emissions would result from direct emissions such as project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power over the life of the project, the energy required to convey water to, and wastewater from the project site, the emissions associated with solid waste generated from the project site, and any fugitive refrigerants from air conditioning or refrigerators. Table 2, summarizes the total GHG emissions associated with proposed project. As shown, the project would generate approximately 1,843 $MTCO_2e$ per year.

Land use and site enhancement measures were applied in CalEEMod to represent project attributes and include the following:

- Urban Project Setting: The CalEEMod User's Guide defines the urban setting as an area which is located within the central city with higher density of land uses than you would find in the suburbs. It may be characterized by multi-family housing and located near office and retail. The project fits this definition as it involves a mixed-use development with residential and commercial uses within the Heart of the City Specific Plan area and near the Cupertino business district.
- Increase Density and Diversity: The project has a density of approximately 25 dwelling units per acre. Additionally, having different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be accommodated by non-auto modes of transport. For example, when residential areas are in the same neighborhood as retail and office buildings, a resident does not need to travel outside of the neighborhood to meet his/her trip needs. As the project involves a mixed-use urban village with a mix of residential, retail, and commercial uses, the diversity measure was applied.
- Improve Destination Accessibility: According to CARB mapping[8], the project is approximately 0.75 miles to the closest business district.
- Improve Pedestrian Network: Providing a pedestrian access network to link areas of the Project site encourages people to walk instead of drive. The project would not have any barriers to pedestrian access and interconnectivity. The project site would connect to the off-site pedestrian network.

The project site is currently developed with 71,254 square-feet of shopping center, which generates approximately 1,484 MTCO$_2$e per year. The project proposes to remove the existing uses and redevelop the site. As a result, the project's emissions would represent a net increase in GHG emissions of 359 MTCO$_2$e per year.

Total Proposed Project-Related Sources of Greenhouse Gases

As shown in Table 2, the net GHG emissions resulting from the proposed project would be approximately 359 MTCO$_2$e per year. The project would not result in an increase in GHG emissions that exceed the BAAQMD's bright-line screening threshold of 1,100 MTCO$_2$e per year. Therefore, project-related GHG emissions would be less than significant and no mitigation measures are required.

The City's General Plan EIR determined that the General Plan would achieve the 2020 and 2035 performance criteria, respectively, which would ensure that the City is on a trajectory that is consistent with the statewide GHG reduction goals. Consequently, short- and long-term GHG emissions impacts of the General Plan are less than significant. As described above, the proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and the project would not result in emissions that exceed applicable BAAQMD thresholds. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

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[8] California Air Resources Board, *Distance to Central Business District*, https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/kml/jobcentermap.htm

Threshold 5.2 Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions?

To address the potential impact, the project consistency with the City of Cupertino Climate Action Plan (CAP) is used for this analysis. The CAP is a qualified Greenhouse Gas Reduction Strategy under CEQA, which can be used to determine the significance of GHG emissions from a project (CEQA Guidelines section 15183.5). The BAAQMD also recognizes the use of a CAP as a significance threshold for a project's GHG emissions. Therefore, if the project is consistent with the CAP, then the project would result in a less than significant cumulative impact to global climate change in 2020.

City of Cupertino Climate Action Plan

The Cupertino Climate Action Plan (CAP) identifies sources of GHG emissions within the City's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic goals, measures, and actions to reduce emissions.

The City's CAP meets BAAQMD guidelines as follows:

- The CAP quantifies citywide GHG emissions, both existing and projected over the specified time period, resulting from activities within the city as defined by the City's General Plan.
- The CAP establishes a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- CAP policy provisions reduce emissions to 15 percent below 2005 levels by 2020.
- CAP policy provisions reduce emissions to 35 percent below 2005 levels by 2030.
- CAP policy provisions provide a foundation for the City to reach the goal of reducing emissions to 80 percent below 1990 levels by 2050.
- The CAP identifies and analyzes the emissions resulting from specific actions or categories of actions anticipated within the city.
- The CAP specifies measures or a group of measures, including performance standards.
- The CAP establishes a mechanism to monitor its progress toward achieving the level and to require amendment if the plan is not achieving specific levels.
- The reduction measures proposed in the CAP build on inventory results and key opportunities prioritized by City staff, members from the community, and elected officials. The strategies in the CAP consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City of Cupertino will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. The standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The proposed project would be consistent with the overall goals of the Cupertino CAP, which is the City's strategic planning document to reduce GHG emissions. As an infill project on a currently developed site, the proposed project would support efforts to reduce GHG emissions from VMT. The redevelopment would achieve the current Building Energy Efficiency Standards and would be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems that would improve energy efficiency. The proposed buildings would comply with Title 24 solar requirements and would meet solar ready requirements are associated with Title 24. While the requirements under Title 24 do not require installation of solar-energy systems, the buildings are built to accept the installation of such a system. Additionally, pursuant to Chapter 16.58 (Green Building Ordinance) of the Cupertino Municipal Code, the project would be required to build to LEED or an alternative reference standard. The proposed project would comply with SB X7-7, which requires California to achieve a 20 percent reduction in urban per capita water use by 2020. The proposed project would implement best management practices for water conservation to achieve the City's water conservation goals. Furthermore, the proposed project would comply with the City's Construction and Demolition Debris Diversion Ordinance, which requires applicable construction projects to divert 60 percent of construction waste. Prior to receiving a final building inspection, a construction recycling report would be submitted to show the tons recycled and disposed by material type. The proposed project would not conflict any strategies to reduce GHG emissions in the CAP and impacts would be less than significant.

In summary, the proposed project, an infill and mixed-use project within a currently developed area would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions.

CARB Scoping Plan

The latest CARB Climate Change Scoping Plan (2017) outlines the state's strategy to return reduce state's GHG emissions to return to 40 percent below 1990 levels by 2030 pursuant to SB 32. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

The project's GHG emissions shown in Table 2 above include reductions associated with statewide strategies such as the Pavley I motor vehicle emission standards, the Low Carbon Fuel Standard (LCFS), and the 2016 Title 24 Energy Efficiency Standards. However, the modeling does not incorporate reductions from the Pavley II (LEV III) Advanced Clean Cars Program (extends to model year 2025), the Renewable Portfolio Standards (RPS), Green Building Code Standards for indoor water use, or the California Model Water Efficient Landscape Ordinance (outdoor water), or the latest 2019 Title 24 Energy Efficiency Standards (effective January 1, 2020). Therefore, actual emissions would be lower than those shown in Table 2 with the implementation of all of the statewide reduction strategies. Furthermore, the project would develop new buildings that would achieve the latest Building Energy Efficiency Standards and pursuant to Chapter 16.58 (Green Building Ordinance) of the Cupertino Municipal Code, would be required to build to LEED or an alternative reference standard. The proposed project would also be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems. The proposed project would not conflict any statewide strategies to reduce GHG emissions. Therefore, impacts would be less than significant in this regard.

Plan Bay Area

The proposed project would be consistent with the overall goals of *Plan Bay Area 2040* in concentrating new development in locations where there is existing infrastructure as the proposed project would redevelop the project site to provide a mix of land uses. Therefore, the proposed project would not conflict with the land use concept plan in *Plan Bay Area 2040* and impacts would be less than significant.

The City's General Plan EIR determined that implementation of the General Plan policies as well as compliance with applicable State standards would ensure consistency with state and regional GHG reduction planning efforts. The General Plan EIR concluded that impact would be less than significant in this regard. As described above, the proposed project would be consistent with the General Plan, the City's CAP, the CARB Scoping Plan, and the Plan Bay Area 2040. Therefore, the proposed project would not result in any impacts beyond those previously identified in the General Plan EIR.

Level of Significance: Less than significant impact.

6 REFERENCES

1. Bay Area Air Quality Management District, *2017 CEQA Air Quality Guidelines*, 2017.
2. Bay Area Air Quality Management District, *Final 2017 Clean Air Plan*, 2017.
3. C2K Architecture, Inc., *Architectural Site Plan,* 2018.
4. California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* 2017.
5. City of Cupertino, *Climate Action Plan*, 2014.
6. City of Cupertino, *Climate Action Plan Update*, 2016.
7. City of Cupertino, *Cupertino General Plan Community Vision 2015-2040*, 2015.
8. City of Cupertino, *2016 Climate Action Plan Progress Report*, 2017.
9. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.
10. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.
11. National Research Council, *Advancing the Science of Climate Change*, 2010.
12. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.
13. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, 2010.
14. U.S. EPA, *Overview of Greenhouse Gases*, 2018.

Appendix A

Greenhouse Gas Emissions Data

Westport

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	232.00	Space	2.09	92,800.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on information from applicant

Land Use - Based on applicants information
Low Rise: Townhomes and Rowhomes

Construction Phase - Anticipated construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Anticipated equipment

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Square-footage of existing shopping center

Grading - Anticipated excavation for parking garage

Architectural Coating -

Vehicle Trips - Based on Trip Generation Table

Woodstoves - Prohibited per BAAQMD Regulation 6, Rule 3

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Per BAAQMD basic control measures

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	30.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	300.00	381.00
tblConstructionPhase	NumDays	20.00	109.00

tblConstructionPhase	PhaseEndDate	8/6/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	8/20/2019	2/13/2019
tblConstructionPhase	PhaseEndDate	10/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	12/22/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	11/24/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/19/2021	12/31/2020
tblConstructionPhase	PhaseStartDate	7/10/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	8/7/2019	1/31/2019
tblConstructionPhase	PhaseStartDate	8/21/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	11/25/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	10/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	12/23/2020	8/1/2020
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5389	6.2680	3.8177	0.0108	0.7302	0.2313	0.9615	0.2733	0.2149	0.4881	0.0000	997.8489	997.8489	0.1579	0.0000	1,001.7966
2020	3.9450	3.4618	3.3626	8.1000e-003	0.3139	0.1580	0.4718	0.0845	0.1489	0.2334	0.0000	726.1599	726.1599	0.0889	0.0000	728.3830
Maximum	**3.9450**	**6.2680**	**3.8177**	**0.0108**	**0.7302**	**0.2313**	**0.9615**	**0.2733**	**0.2149**	**0.4881**	**0.0000**	**997.8489**	**997.8489**	**0.1579**	**0.0000**	**1,001.7966**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5389	6.2680	3.8177	0.0108	0.4271	0.2313	0.6584	0.1483	0.2149	0.3631	0.0000	997.8483	997.8483	0.1579	0.0000	1,001.7961
2020	3.9450	3.4618	3.3626	8.1000e-003	0.2980	0.1580	0.4560	0.0806	0.1489	0.2295	0.0000	726.1595	726.1595	0.0889	0.0000	728.3826
Maximum	**3.9450**	**6.2680**	**3.8177**	**0.0108**	**0.4271**	**0.2313**	**0.6584**	**0.1483**	**0.2149**	**0.3631**	**0.0000**	**997.8483**	**997.8483**	**0.1579**	**0.0000**	**1,001.7961**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.55**	**0.00**	**22.26**	**36.03**	**0.00**	**17.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**7-10-2019**	**10-9-2019**	0.9988	0.9988
2	**10-10-2019**	**1-9-2020**	1.0398	1.0398
3	**1-10-2020**	**4-9-2020**	0.9398	0.9398
4	**4-10-2020**	**7-9-2020**	0.9326	0.9326
5	**7-10-2020**	**9-30-2020**	2.3033	2.3033
		Highest	2.3033	2.3033

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3891	0.0276	1.9807	6.8000e-004		0.0384	0.0384		0.0384	0.0384	3.7744	7.4734	11.2478	0.0206	8.0000e-005	11.7879
Energy	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	645.6476	645.6476	0.0260	7.1600e-003	648.4298
Mobile	0.5548	2.2399	6.1817	0.0187	1.6140	0.0189	1.6329	0.4321	0.0177	0.4498	0.0000	1,713.5087	1,713.5087	0.0639	0.0000	1,715.1052
Waste						0.0000	0.0000		0.0000	0.0000	26.8598	0.0000	26.8598	1.5874	0.0000	66.5439
Water						0.0000	0.0000		0.0000	0.0000	5.4722	38.1972	43.6694	0.5638	0.0136	61.8251
Total	**2.9565**	**2.3753**	**8.2093**	**0.0201**	**1.6140**	**0.0661**	**1.6800**	**0.4321**	**0.0649**	**0.4969**	**36.1064**	**2,404.8269**	**2,440.9333**	**2.2616**	**0.0209**	**2,503.6919**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3701	0.0248	1.8079	1.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	7.4734	7.4734	2.9700e-003	8.0000e-005	7.5724
Energy	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	645.6476	645.6476	0.0260	7.1600e-003	648.4298
Mobile	0.4881	1.7632	4.5022	0.0120	0.9906	0.0125	1.0031	0.2652	0.0117	0.2769	0.0000	1,101.2386	1,101.2386	0.0466	0.0000	1,102.4039
Waste						0.0000	0.0000		0.0000	0.0000	13.4299	0.0000	13.4299	0.7937	0.0000	33.2720
Water						0.0000	0.0000		0.0000	0.0000	4.3778	32.0931	36.4708	0.4511	0.0109	51.0014

Total	**2.8708**	**1.8958**	**6.3569**	**0.0129**	**0.9906**	**0.0315**	**1.0221**	**0.2652**	**0.0307**	**0.2959**	**17.8077**	**1,786.4527**	**1,804.2603**	**1.3203**	**0.0182**	**1,842.6794**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.90**	**20.18**	**22.56**	**36.10**	**38.62**	**52.37**	**39.16**	**38.63**	**52.72**	**40.47**	**50.68**	**25.71**	**26.08**	**41.62**	**12.99**	**26.40**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	
2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 3.14

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	52.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0351	0.0000	0.0351	5.3100e-003	0.0000	5.3100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.3936	0.2427	4.3000e-004		0.0197	0.0197		0.0184	0.0184	0.0000	38.0890	38.0890	0.0106	0.0000	38.3539
Total	**0.0387**	**0.3936**	**0.2427**	**4.3000e-004**	**0.0351**	**0.0197**	**0.0548**	**5.3100e-003**	**0.0184**	**0.0237**	**0.0000**	**38.0890**	**38.0890**	**0.0106**	**0.0000**	**38.3539**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4700e-003	0.0504	9.9600e-003	1.3000e-004	2.7500e-003	1.9000e-004	2.9400e-003	7.5000e-004	1.9000e-004	9.4000e-004	0.0000	12.4845	12.4845	5.9000e-004	0.0000	12.4991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**2.0700e-003**	**0.0509**	**0.0146**	**1.4000e-004**	**4.0600e-003**	**2.0000e-004**	**4.2600e-003**	**1.1000e-003**	**2.0000e-004**	**1.3000e-003**	**0.0000**	**13.6429**	**13.6429**	**6.2000e-004**	**0.0000**	**13.6583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0150	0.0000	0.0150	2.2700e-003	0.0000	2.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.3936	0.2427	4.3000e-004		0.0197	0.0197		0.0184	0.0184	0.0000	38.0889	38.0889	0.0106	0.0000	38.3538
Total	**0.0387**	**0.3936**	**0.2427**	**4.3000e-004**	**0.0150**	**0.0197**	**0.0347**	**2.2700e-003**	**0.0184**	**0.0206**	**0.0000**	**38.0889**	**38.0889**	**0.0106**	**0.0000**	**38.3538**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4700e-003	0.0504	9.9600e-003	1.3000e-004	2.6200e-003	1.9000e-004	2.8200e-003	7.2000e-004	1.9000e-004	9.1000e-004	0.0000	12.4845	12.4845	5.9000e-004	0.0000	12.4991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**2.0700e-003**	**0.0509**	**0.0146**	**1.4000e-004**	**3.8600e-003**	**2.0000e-004**	**4.0700e-003**	**1.0500e-003**	**2.0000e-004**	**1.2500e-003**	**0.0000**	**13.6429**	**13.6429**	**6.2000e-004**	**0.0000**	**13.6583**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.4000e-004	2.5100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6319	0.6319	2.0000e-005	0.0000	0.6323
Total	**3.3000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6319**	**0.6319**	**2.0000e-005**	**0.0000**	**0.6323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0386	0.0000	0.0386	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0386**	**0.0120**	**0.0506**	**0.0212**	**0.0110**	**0.0322**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.4000e-004	2.5100e-003	1.0000e-005	6.8000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.6319	0.6319	2.0000e-005	0.0000	0.6323
Total	**3.3000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**6.8000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6319**	**0.6319**	**2.0000e-005**	**0.0000**	**0.6323**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3855	0.0000	0.3855	0.1588	0.0000	0.1588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2085	2.3989	1.4686	2.7300e-003		0.1048	0.1048		0.0965	0.0965	0.0000	245.0858	245.0858	0.0775	0.0000	247.0244
Total	**0.2085**	**2.3989**	**1.4686**	**2.7300e-003**	**0.3855**	**0.1048**	**0.4904**	**0.1588**	**0.0965**	**0.2553**	**0.0000**	**245.0858**	**245.0858**	**0.0775**	**0.0000**	**247.0244**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0392	1.3427	0.2652	3.4400e-003	0.0731	5.1500e-003	0.0783	0.0201	4.9300e-003	0.0250	0.0000	332.3406	332.3406	0.0156	0.0000	332.7299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.3800e-003	0.0246	7.0000e-005	6.9800e-003	5.0000e-005	7.0300e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.1783	6.1783	1.7000e-004	0.0000	6.1825
Total	**0.0424**	**1.3451**	**0.2898**	**3.5100e-003**	**0.0801**	**5.2000e-003**	**0.0853**	**0.0220**	**4.9700e-003**	**0.0269**	**0.0000**	**338.5189**	**338.5189**	**0.0157**	**0.0000**	**338.9124**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1648	0.0000	0.1648	0.0679	0.0000	0.0679	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2085	2.3989	1.4686	2.7300e-003		0.1048	0.1048		0.0965	0.0965	0.0000	245.0855	245.0855	0.0775	0.0000	247.0241
Total	**0.2085**	**2.3989**	**1.4686**	**2.7300e-003**	**0.1648**	**0.1048**	**0.2697**	**0.0679**	**0.0965**	**0.1644**	**0.0000**	**245.0855**	**245.0855**	**0.0775**	**0.0000**	**247.0241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0392	1.3427	0.2652	3.4400e-003	0.0698	5.1500e-003	0.0750	0.0193	4.9300e-003	0.0242	0.0000	332.3406	332.3406	0.0156	0.0000	332.7299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	3.2000e-003	2.3800e-003	0.0246	7.0000e-005	6.6200e-003	5.0000e-005	6.6600e-003	1.7700e-003	4.0000e-005	1.8100e-003	0.0000	6.1783	6.1783	1.7000e-004	0.0000	6.1825
Total	**0.0424**	**1.3451**	**0.2898**	**3.5100e-003**	**0.0764**	**5.2000e-003**	**0.0816**	**0.0211**	**4.9700e-003**	**0.0260**	**0.0000**	**338.5189**	**338.5189**	**0.0157**	**0.0000**	**338.9124**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1405	1.2542	1.0212	1.6000e-003		0.0768	0.0768		0.0722	0.0722	0.0000	139.8870	139.8870	0.0341	0.0000	140.7389
Total	**0.1405**	**1.2542**	**1.0212**	**1.6000e-003**		**0.0768**	**0.0768**		**0.0722**	**0.0722**	**0.0000**	**139.8870**	**139.8870**	**0.0341**	**0.0000**	**140.7389**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0152	0.3907	0.1049	8.5000e-004	0.0204	2.8100e-003	0.0232	5.8800e-003	2.6900e-003	8.5700e-003	0.0000	81.3882	81.3882	4.0400e-003	0.0000	81.4892
Worker	0.0517	0.0385	0.3973	1.1000e-003	0.1128	7.4000e-004	0.1135	0.0300	6.9000e-004	0.0307	0.0000	99.8398	99.8398	2.7200e-003	0.0000	99.9077
Total	**0.0668**	**0.4292**	**0.5021**	**1.9500e-003**	**0.1331**	**3.5500e-003**	**0.1367**	**0.0359**	**3.3800e-003**	**0.0393**	**0.0000**	**181.2280**	**181.2280**	**6.7600e-003**	**0.0000**	**181.3969**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1405	1.2542	1.0212	1.6000e-003		0.0768	0.0768		0.0722	0.0722	0.0000	139.8868	139.8868	0.0341	0.0000	140.7388
Total	**0.1405**	**1.2542**	**1.0212**	**1.6000e-003**		**0.0768**	**0.0768**		**0.0722**	**0.0722**	**0.0000**	**139.8868**	**139.8868**	**0.0341**	**0.0000**	**140.7388**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0152	0.3907	0.1049	8.5000e-004	0.0195	2.8100e-003	0.0223	5.6700e-003	2.6900e-003	8.3600e-003	0.0000	81.3882	81.3882	4.0400e-003	0.0000	81.4892
Worker	0.0517	0.0385	0.3973	1.1000e-003	0.1069	7.4000e-004	0.1077	0.0286	6.9000e-004	0.0293	0.0000	99.8398	99.8398	2.7200e-003	0.0000	99.9077
Total	**0.0668**	**0.4292**	**0.5021**	**1.9500e-003**	**0.1264**	**3.5500e-003**	**0.1300**	**0.0342**	**3.3800e-003**	**0.0376**	**0.0000**	**181.2280**	**181.2280**	**6.7600e-003**	**0.0000**	**181.3969**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0270	0.7756	0.2066	1.8600e-003	0.0448	3.8400e-003	0.0487	0.0130	3.6700e-003	0.0166	0.0000	178.0948	178.0948	8.1700e-003	0.0000	178.2990
Worker	0.1040	0.0747	0.7836	2.3600e-003	0.2483	1.6000e-003	0.2499	0.0660	1.4800e-003	0.0675	0.0000	212.9480	212.9480	5.2200e-003	0.0000	213.0786
Total	**0.1310**	**0.8504**	**0.9901**	**4.2200e-003**	**0.2931**	**5.4400e-003**	**0.2986**	**0.0790**	**5.1500e-003**	**0.0842**	**0.0000**	**391.0428**	**391.0428**	**0.0134**	**0.0000**	**391.3776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0270	0.7756	0.2066	1.8600e-003	0.0429	3.8400e-003	0.0468	0.0125	3.6700e-003	0.0162	0.0000	178.0948	178.0948	8.1700e-003	0.0000	178.2990
Worker	0.1040	0.0747	0.7836	2.3600e-003	0.2354	1.6000e-003	0.2370	0.0629	1.4800e-003	0.0644	0.0000	212.9480	212.9480	5.2200e-003	0.0000	213.0786
Total	**0.1310**	**0.8504**	**0.9901**	**4.2200e-003**	**0.2784**	**5.4400e-003**	**0.2838**	**0.0754**	**5.1500e-003**	**0.0805**	**0.0000**	**391.0428**	**391.0428**	**0.0134**	**0.0000**	**391.3776**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1677	0.1613	2.5000e-004		9.0700e-003	9.0700e-003		8.3400e-003	8.3400e-003	0.0000	22.5227	22.5227	7.1300e-003	0.0000	22.7009
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1677**	**0.1613**	**2.5000e-004**		**9.0700e-003**	**9.0700e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**22.5227**	**22.5227**	**7.1300e-003**	**0.0000**	**22.7009**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**6.0000e-004**	**4.5000e-004**	**4.6100e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1584**	**1.1584**	**3.0000e-005**	**0.0000**	**1.1592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1677	0.1613	2.5000e-004		9.0700e-003	9.0700e-003		8.3400e-003	8.3400e-003	0.0000	22.5227	22.5227	7.1300e-003	0.0000	22.7008
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1677**	**0.1613**	**2.5000e-004**		**9.0700e-003**	**9.0700e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**22.5227**	**22.5227**	**7.1300e-003**	**0.0000**	**22.7008**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**6.0000e-004**	**4.5000e-004**	**4.6100e-003**	**1.0000e-005**	**1.2400e-003**	**1.0000e-005**	**1.2500e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.1584**	**1.1584**	**3.0000e-005**	**0.0000**	**1.1592**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5144					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**3.5276**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6900e-003	6.2400e-003	0.0655	2.0000e-004	0.0208	1.3000e-004	0.0209	5.5200e-003	1.2000e-004	5.6400e-003	0.0000	17.7927	17.7927	4.4000e-004	0.0000	17.8036

Total	**8.6900e-003**	**6.2400e-003**	**0.0655**	**2.0000e-004**	**0.0208**	**1.3000e-004**	**0.0209**	**5.5200e-003**	**1.2000e-004**	**5.6400e-003**	**0.0000**	**17.7927**	**17.7927**	**4.4000e-004**	**0.0000**	**17.8036**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5144					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**3.5276**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6900e-003	6.2400e-003	0.0655	2.0000e-004	0.0197	1.3000e-004	0.0198	5.2500e-003	1.2000e-004	5.3800e-003	0.0000	17.7927	17.7927	4.4000e-004	0.0000	17.8036
Total	**8.6900e-003**	**6.2400e-003**	**0.0655**	**2.0000e-004**	**0.0197**	**1.3000e-004**	**0.0198**	**5.2500e-003**	**1.2000e-004**	**5.3800e-003**	**0.0000**	**17.7927**	**17.7927**	**4.4000e-004**	**0.0000**	**17.8036**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4881	1.7632	4.5022	0.0120	0.9906	0.0125	1.0031	0.2652	0.0117	0.2769	0.0000	1,101.2386	1,101.2386	0.0466	0.0000	1,102.4039
Unmitigated	0.5548	2.2399	6.1817	0.0187	1.6140	0.0189	1.6329	0.4321	0.0177	0.4498	0.0000	1,713.5087	1,713.5087	0.0639	0.0000	1,715.1052

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	534.16	1,446,817	887,991
Apartments Mid Rise	625.60	734.85	673.90	1,496,873	918,713
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	76.05	291,199	178,725
Strip Mall	755.00	840.80	408.60	1,105,392	678,439
Total	2,170.23	2,284.90	1,692.71	4,340,280	2,663,868

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	520.9796	520.9796	0.0236	4.8700e-003	523.0209
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	520.9796	520.9796	0.0236	4.8700e-003	523.0209
NaturalGas Mitigated	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6680	124.6680	2.3900e-003	2.2900e-003	125.4089
NaturalGas Unmitigated	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6680	124.6680	2.3900e-003	2.2900e-003	125.4089

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Apartments Mid Rise	993537	5.3600e-003	0.0458	0.0195	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	53.0189	53.0189	1.0200e-003	9.7000e-004	53.3340
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	397755	2.1400e-003	0.0183	7.8000e-003	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.2257	21.2257	4.1000e-004	3.9000e-004	21.3519
Strip Mall	47400	2.6000e-004	2.3200e-003	1.9500e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5294	2.5294	5.0000e-005	5.0000e-005	2.5445
Total		**0.0126**	**0.1078**	**0.0468**	**6.8000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.6680**	**124.6680**	**2.4000e-003**	**2.2900e-003**	**125.4089**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Apartments Mid Rise	993537	5.3600e-003	0.0458	0.0195	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	53.0189	53.0189	1.0200e-003	9.7000e-004	53.3340
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Retirement Community	397755	2.1400e-003	0.0183	7.8000e-003	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.2257	21.2257	4.1000e-004	3.9000e-004	21.3519
Strip Mall	47400	2.6000e-004	2.3200e-003	1.9500e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5294	2.5294	5.0000e-005	5.0000e-005	2.5445
Total		**0.0126**	**0.1078**	**0.0468**	**6.8000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.6680**	**124.6680**	**2.4000e-003**	**2.2900e-003**	**125.4089**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664
Apartments Mid Rise	474760	138.1132	6.2500e-003	1.2900e-003	138.6544
Enclosed Parking Structure	526176	153.0706	6.9200e-003	1.4300e-003	153.6704
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	177042	51.5036	2.3300e-003	4.8000e-004	51.7054
Strip Mall	213800	62.1969	2.8100e-003	5.8000e-004	62.4406
Total		**520.9796**	**0.0236**	**4.8600e-003**	**523.0209**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664

Apartments Mid Rise	474760	138.1132	6.2500e-003	1.2900e-003	138.6544
Enclosed Parking Structure	526176	153.0706	6.9200e-003	1.4300e-003	153.6704
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	177042	51.5036	2.3300e-003	4.8000e-004	51.7054
Strip Mall	213800	62.1969	2.8100e-003	5.8000e-004	62.4406
Total		**520.9796**	**0.0236**	**4.8600e-003**	**523.0209**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3701	0.0248	1.8079	1.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	7.4734	7.4734	2.9700e-003	8.0000e-005	7.5724
Unmitigated	2.3891	0.0276	1.9807	6.8000e-004		0.0384	0.0384		0.0384	0.0384	3.7744	7.4734	11.2478	0.0206	8.0000e-005	11.7879

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0195	6.7300e-003	0.1745	5.9000e-004		0.0285	0.0285		0.0285	0.0285	3.7744	4.5317	8.3061	0.0177	8.0000e-005	8.7741
Landscaping	0.0552	0.0209	1.8063	1.0000e-004		9.9300e-003	9.9300e-003		9.9300e-003	9.9300e-003	0.0000	2.9418	2.9418	2.8800e-003	0.0000	3.0138
Total	**2.3891**	**0.0276**	**1.9807**	**6.9000e-004**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**3.7744**	**7.4734**	**11.2478**	**0.0206**	**8.0000e-005**	**11.7879**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.6000e-004	3.9100e-003	1.6700e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5317	4.5317	9.0000e-005	8.0000e-005	4.5586
Landscaping	0.0552	0.0209	1.8063	1.0000e-004		9.9300e-003	9.9300e-003		9.9300e-003	9.9300e-003	0.0000	2.9418	2.9418	2.8800e-003	0.0000	3.0138
Total	**2.3701**	**0.0248**	**1.8079**	**1.2000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**	**0.0000**	**7.4734**	**7.4734**	**2.9700e-003**	**8.0000e-005**	**7.5724**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.4708	0.4511	0.0109	51.0014
Unmitigated	43.6694	0.5638	0.0136	61.8251

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.73355 / 3.61463	14.5247	0.1874	4.5300e-003	20.5598
Apartments Mid Rise	7.49271 / 4.72367	18.9811	0.2449	5.9200e-003	26.8679
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.54101 / 1.60194	6.4371	0.0831	2.0100e-003	9.1117
Strip Mall	1.48145 / 0.907986	3.7265	0.0484	1.1700e-003	5.2857
Total		**43.6694**	**0.5638**	**0.0136**	**61.8251**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.58684 / 3.39414	12.1313	0.1500	3.6300e-003	16.9614
Apartments Mid Rise	5.99417 / 4.43552	15.8534	0.1960	4.7400e-003	22.1655
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.03281 / 1.50422	5.3764	0.0665	1.6100e-003	7.5170
Strip Mall	1.18516 / 0.852599	3.1097	0.0387	9.4000e-004	4.3576
Total		**36.4708**	**0.4511**	**0.0109**	**51.0014**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.4299	0.7937	0.0000	33.2720

Unmitigated	26.8598	1.5874	0.0000	66.5439

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	40.48	8.2171	0.4856	0.0000	20.3575
Apartments Mid Rise	52.9	10.7382	0.6346	0.0000	26.6035
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	17.94	3.6417	0.2152	0.0000	9.0221
Strip Mall	21	4.2628	0.2519	0.0000	10.5609
Total		**26.8598**	**1.5874**	**0.0000**	**66.5439**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	20.24	4.1085	0.2428	0.0000	10.1787
Apartments Mid Rise	26.45	5.3691	0.3173	0.0000	13.3018

Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	8.97	1.8208	0.1076	0.0000	4.5110
Strip Mall	10.5	2.1314	0.1260	0.0000	5.2805
Total		**13.4299**	**0.7937**	**0.0000**	**33.2720**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Westport Existing

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	71.25	1000sqft	8.10	71,254.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing project

Construction Phase - Existing project

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Square-footage of existing shopping center

Grading - Anticipated excavation for parking garage

Architectural Coating -

Vehicle Trips - Based on Trip Generation Table

Woodstoves -

Energy Use -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblLandUse	LandUseSquareFeet	71,250.00	71,254.00
tblLandUse	LotAcreage	1.64	8.10
tblVehicleTrips	WD_TR	44.32	32.10

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.8900e-003	0.0192	0.0114	2.0000e-005	6.0000e-005	9.7000e-004	1.0300e-003	2.0000e-005	9.0000e-004	9.2000e-004	0.0000	1.8105	1.8105	4.9000e-004	0.0000	1.8226
Maximum	**1.8900e-003**	**0.0192**	**0.0114**	**2.0000e-005**	**6.0000e-005**	**9.7000e-004**	**1.0300e-003**	**2.0000e-005**	**9.0000e-004**	**9.2000e-004**	**0.0000**	**1.8105**	**1.8105**	**4.9000e-004**	**0.0000**	**1.8226**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.8900e-003	0.0192	0.0114	2.0000e-005	6.0000e-005	9.7000e-004	1.0300e-003	2.0000e-005	9.0000e-004	9.2000e-004	0.0000	1.8105	1.8105	4.9000e-004	0.0000	1.8226
Maximum	**1.8900e-003**	**0.0192**	**0.0114**	**2.0000e-005**	**6.0000e-005**	**9.7000e-004**	**1.0300e-003**	**2.0000e-005**	**9.0000e-004**	**9.2000e-004**	**0.0000**	**1.8105**	**1.8105**	**4.9000e-004**	**0.0000**	**1.8226**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**5-7-2018**	**8-6-2018**	0.0151	0.0151
		Highest	0.0151	0.0151

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3155	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2700e-003	1.2700e-003	0.0000	0.0000	1.3600e-003
Energy	9.1000e-004	8.2800e-003	6.9500e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	230.6005	230.6005	0.0102	2.2400e-003	231.5223
Mobile	0.6633	2.3792	6.6579	0.0163	1.2999	0.0200	1.3199	0.3481	0.0188	0.3668	0.0000	1,488.3029	1,488.3029	0.0665	0.0000	1,489.9660
Waste						0.0000	0.0000		0.0000	0.0000	15.1858	0.0000	15.1858	0.8975	0.0000	37.6221
Water						0.0000	0.0000		0.0000	0.0000	1.6744	11.6012	13.2756	0.1725	4.1700e-003	18.8304

Total	**0.9797**	**2.3874**	**6.6655**	**0.0164**	**1.2999**	**0.0206**	**1.3205**	**0.3481**	**0.0194**	**0.3675**	**16.8601**	**1,730.5058**	**1,747.3659**	**1.1467**	**6.4100e-003**	**1,777.9422**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3155	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2700e-003	1.2700e-003	0.0000	0.0000	1.3600e-003
Energy	9.1000e-004	8.2800e-003	6.9500e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	230.6005	230.6005	0.0102	2.2400e-003	231.5223
Mobile	0.6287	2.1279	5.8013	0.0133	1.0351	0.0165	1.0515	0.2771	0.0155	0.2926	0.0000	1,213.0067	1,213.0067	0.0580	0.0000	1,214.4571
Waste						0.0000	0.0000		0.0000	0.0000	7.5929	0.0000	7.5929	0.4487	0.0000	18.8110
Water						0.0000	0.0000		0.0000	0.0000	1.6744	11.4003	13.0747	0.1725	4.1700e-003	18.6288
Total	**0.9451**	**2.1362**	**5.8089**	**0.0133**	**1.0351**	**0.0171**	**1.0522**	**0.2771**	**0.0161**	**0.2933**	**9.2672**	**1,455.0087**	**1,464.2759**	**0.6894**	**6.4100e-003**	**1,483.4205**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**3.53**	**10.53**	**12.85**	**18.46**	**20.37**	**16.91**	**20.32**	**20.37**	**16.90**	**20.19**	**45.03**	**15.92**	**16.20**	**39.88**	**0.00**	**16.57**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/8/2018	5/8/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8600e-003	0.0192	0.0112	2.0000e-005		9.7000e-004	9.7000e-004		9.0000e-004	9.0000e-004	0.0000	1.7562	1.7562	4.8000e-004	0.0000	1.7683
Total	**1.8600e-003**	**0.0192**	**0.0112**	**2.0000e-005**		**9.7000e-004**	**9.7000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**1.7562**	**1.7562**	**4.8000e-004**	**0.0000**	**1.7683**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0543	0.0543	0.0000	0.0000	0.0543
Total	**3.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0543**	**0.0543**	**0.0000**	**0.0000**	**0.0543**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8600e-003	0.0192	0.0112	2.0000e-005		9.7000e-004	9.7000e-004		9.0000e-004	9.0000e-004	0.0000	1.7562	1.7562	4.8000e-004	0.0000	1.7683
Total	**1.8600e-003**	**0.0192**	**0.0112**	**2.0000e-005**		**9.7000e-004**	**9.7000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**1.7562**	**1.7562**	**4.8000e-004**	**0.0000**	**1.7683**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0543	0.0543	0.0000	0.0000	0.0543
Total	**3.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0543**	**0.0543**	**0.0000**	**0.0000**	**0.0543**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6287	2.1279	5.8013	0.0133	1.0351	0.0165	1.0515	0.2771	0.0155	0.2926	0.0000	1,213.0067	1,213.0067	0.0580	0.0000	1,214.4571
Unmitigated	0.6633	2.3792	6.6579	0.0163	1.2999	0.0200	1.3199	0.3481	0.0188	0.3668	0.0000	1,488.3029	1,488.3029	0.0665	0.0000	1,489.9660

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	2,286.84	2,995.35	1455.64	3,494,816	2,782,747
Total	2,286.84	2,995.35	1,455.64	3,494,816	2,782,747

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.596719	0.040200	0.188056	0.111125	0.016796	0.004948	0.012194	0.019466	0.002007	0.001626	0.005410	0.000612	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	221.5888	221.5888	0.0100	2.0700e-003	222.4571
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	221.5888	221.5888	0.0100	2.0700e-003	222.4571
NaturalGas Mitigated	9.1000e-004	8.2800e-003	6.9500e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0117	9.0117	1.7000e-004	1.7000e-004	9.0652
NaturalGas Unmitigated	9.1000e-004	8.2800e-003	6.9500e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0117	9.0117	1.7000e-004	1.7000e-004	9.0652

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	168872	9.1000e-004	8.2800e-003	6.9500e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0117	9.0117	1.7000e-004	1.7000e-004	9.0652
Total		**9.1000e-004**	**8.2800e-003**	**6.9500e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0117**	**9.0117**	**1.7000e-004**	**1.7000e-004**	**9.0652**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	168872	9.1000e-004	8.2800e-003	6.9500e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	9.0117	9.0117	1.7000e-004	1.7000e-004	9.0652
Total		**9.1000e-004**	**8.2800e-003**	**6.9500e-003**	**5.0000e-005**		**6.3000e-004**	**6.3000e-004**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**9.0117**	**9.0117**	**1.7000e-004**	**1.7000e-004**	**9.0652**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	761705	221.5888	0.0100	2.0700e-003	222.4571
Total		**221.5888**	**0.0100**	**2.0700e-003**	**222.4571**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	761705	221.5888	0.0100	2.0700e-003	222.4571
Total		**221.5888**	**0.0100**	**2.0700e-003**	**222.4571**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3155	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2700e-003	1.2700e-003	0.0000	0.0000	1.3600e-003
Unmitigated	0.3155	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2700e-003	1.2700e-003	0.0000	0.0000	1.3600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2700e-003	1.2700e-003	0.0000	0.0000	1.3600e-003
Total	**0.3155**	**1.0000e-005**	**6.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2700e-003**	**1.2700e-003**	**0.0000**	**0.0000**	**1.3600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2700e-003	1.2700e-003	0.0000	0.0000	1.3600e-003
Total	**0.3155**	**1.0000e-005**	**6.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2700e-003**	**1.2700e-003**	**0.0000**	**0.0000**	**1.3600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.0747	0.1725	4.1700e-003	18.6288
Unmitigated	13.2756	0.1725	4.1700e-003	18.8304

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	5.27767 / 3.2347	13.2756	0.1725	4.1700e-003	18.8304
Total		**13.2756**	**0.1725**	**4.1700e-003**	**18.8304**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Strip Mall	5.27767 / 3.03738	13.0747	0.1725	4.1700e-003	18.6288
Total		**13.0747**	**0.1725**	**4.1700e-003**	**18.6288**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.5929	0.4487	0.0000	18.8110
Unmitigated	15.1858	0.8975	0.0000	37.6221

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	74.81	15.1858	0.8975	0.0000	37.6221

Total		**15.1858**	**0.8975**	**0.0000**	**37.6221**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	37.405	7.5929	0.4487	0.0000	18.8110
Total		**7.5929**	**0.4487**	**0.0000**	**18.8110**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX F:
LIMITED ENVIRONMENTAL SITE CHARACTERIZATION

LANGAN TREADWELL ROLLO

Technical Excellence
Practical Experience
Client Responsiveness

28 January 2015

Mr. Mark Tersini
KT Properties, Inc.
21710 Stevens Creek Blvd., Suite 200
Cupertino, California 95014

Subject: **Limited Environmental Site Characterization**
The Oaks at 21255 Stevens Creek Boulevard
Cupertino, California
Langan Project: 770619001

Dear Mr. Tersini:

This letter report presents the results of the limited environmental site characterization (ESC) performed by Langan Treadwell Rollo (Langan) for the proposed development at The Oaks which is located at 21255 Stevens Creek Boulevard, Cupertino, California (site). The site is northwest of the intersection of Stevens Creek Boulevard and Mary Avenue, across from DeAnza College. It is bound on the north and east side by Mary Avenue, Stevens Creek Boulevard to the south and an on-ramp onto Highway 85 to the west. It is currently The Oaks shopping center and is occupied by several one-story buildings and surrounding paved parking lots and landscaping.

We understand that the proposed development is not yet planned, but that a mid- to high-rise building with one to three basement levels is being considered. The purpose of this ESC was to conduct soil sampling and analysis to assess the potential for soil contamination resulting from past and/or present site activities and nearby off-site operations. The objective of the ESC was to preliminarily characterize the soil to assist in the off-haul of excavated material from the site.

SUBSURFACE INVESTIGATION

On 2 and 3 October 2014, Langan drilled three exploratory borings (B-1, B-2, and B-3) with a truck-mounted hollow stem auger drill rig to collect soil samples for chemical analysis. Drilling was conducted by Gregg Drilling and Testing, Inc. a project team member from Martinez, California. Prior to performing the field exploration, Underground Service Alert (USA) was contacted and a private utility locator was retained to check the boring locations for existing utilities.

The borings were drilled with a hollow stem auger to about 47 feet below ground surface (bgs). Our engineer logged the borings and obtained samples of the material encountered for visual classification and laboratory testing. Logs of the borings are presented in Appendix A as Figures A-1 through A-3. The soil encountered in the borings was classified in accordance with the Classification Chart presented on Figure A-4.

Soil samples were collected at approximate depths of 2.5, 5.0, 8.0, 10.0, 15.0, and 17.0 feet bgs. Each sample tube was sealed with Teflon and plastic caps, labeled, and placed on ice in a cooler for delivery to the analytical laboratory under chain of custody procedures. A total of four soil samples from each boring were analyzed for the chemical parameters discussed below, at a State of California certified analytical laboratory. The other samples were held pending results of the initial round of analyses.

Upon completion, the boreholes were backfilled with cement grout in accordance with the requirements of the Santa Clara Valley Water District (SCVWD). The soil cuttings from the borings were collected in 55-gallon drums, which were stored temporarily at the site, tested, and eventually transported off-site for proper disposal.

SUBSURFACE CONDITIONS

The site is in Cupertino, which is underlain by alluvial sediment deposited from the Santa Cruz Mountains. These alluvial fan deposits are typically coarse grained with large amounts of gravel deposits.

The surface material encountered in the borings consists of 3.5 to 6 inches of asphalt concrete (AC) and aggregate base (AB). Beneath the pavement section, the upper 2.5 to 6.5 feet consists of very dense sand with clay and gravel and hard sandy clay with varying amounts of gravel. Below these depths are medium dense to very dense sand and gravel layers with varying amounts of silt and clay interbedded with 3.5 to 7 feet thick layers of very stiff to hard sandy clay, sandy clay with gravel, and clay with gravel to the maximum explored depth of 46.5 feet.

During the investigation, groundwater was not encountered while drilling the three borings. The California Geological Survey, as part of their Seismic Hazards Zone Report (Cupertino Quadrangle) reported the historic high groundwater level in this area as approximately 50 feet bgs.

ANALYTICAL TESTING

A total of twelve soil samples were submitted to McCampbell Analytical, Inc. a state-certified laboratory in Pittsburg, California. The chemical analytical schedule was chosen to satisfy soil profiling scenarios generally accepted by landfills. The soil samples were analyzed for some or all of the following: total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs), California assessment metals (CAM) 17 metals, and leaking underground fuel tank (LUFT) 5 metals.

ANALYTICAL RESULTS

The soil analytical results are presented in Tables 1 and 2 and the certified laboratory reports and chain-of-custody records are presented in Appendix B.

Soil samples analyzed for metals were initially compared to total threshold limit concentration (TTLC) criteria. Selected soil samples equal to or exceeding the soluble threshold limit concentration (STLC) were additionally analyzed for STLC by California waste extraction test (WET) method based on their initial total metal concentrations. The STLC analyses were run to assess if metal concentrations in soil were at State of California hazardous waste levels.

Non-Metal Compounds

Soil analytical results for parameters other than metals are summarized in Table 1. TPHd was detected at or above the laboratory reporting limit (1 milligram per kilogram (mg/kg)) in two of the twelve samples analyzed at concentrations of 1.2 mg/kg and 4.4 mg/kg. TPHmo was detected at or above the laboratory reporting limit (5 mg/kg) in two of the twelve samples analyzed at concentrations of 8.2 mg/kg and 17 mg/kg. TPHg was not detected above the laboratory reporting limit (1 mg/kg) in any of the twelve samples analyzed.

No VOCs, SVOCs, PCBs, or OCPS were detected above laboratory reporting limits in any of the samples analyzed.

Metals

The metal analytical results are summarized in Table 2. Total lead was detected at or above the laboratory reporting limit in all twelve of the samples analyzed at concentrations ranging from 3.9 mg/kg to 17 mg/kg (Table 2). Total chromium was detected in each of the twelve samples analyzed at concentrations ranging from 26 mg/kg to 81 mg/kg (Table 2). Total chromium was detected at concentrations above 50 mg/kg, but below 1000 mg/kg, in nine of the twelve samples analyzed. Each of these samples was subsequently run for STLC chromium to determine soluble chromium levels. STLC chromium was detected at or above the laboratory reporting limit in three of the nine samples analyzed at concentrations ranging from 0.057 milligrams per liter (mg/L) to 0.22 mg/L. None of three soil samples exceeded the State of California hazardous waste criteria of 5 mg/L.

The remaining metal concentrations were within normal[1] background ranges found in the western United States.

Based on the analytical results from the chemical analyses of soil samples from the exploratory borings, none of the material contains elevated metals at concentrations exceeding State of California or Federal hazardous waste levels.

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[1] "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984.

DISCUSSION

The site is northwest of the intersection of Stevens Creek Boulevard and Mary Avenue, across from DeAnza College. It is bound on the north and east side by Mary Avenue, Stevens Creek Boulevard to the south and an on-ramp onto Highway 85 to the west. It is currently The Oaks shopping center and is occupied by several one-story buildings and surrounding paved parking lots and landscaping. We understand that the proposed development is not yet planned, but that a mid- to high-rise building with one to three basement levels is being considered.

The site is in Cupertino, which is underlain by alluvial sediment deposited from the Santa Cruz Mountains. These alluvial fan deposits are typically coarse grained with large amounts of gravel deposits.

The surface material encountered in the borings consists of 3.5 to 6 inches of AC and AB. Beneath the pavement section, the upper 2.5 to 6.5 feet consists of very dense sand with clay and gravel and hard sandy clay with varying amounts of gravel. Below these depths are medium dense to very dense sand and gravel layers with varying amounts of silt and clay interbedded with 3.5 to 7 feet thick layers of very stiff to hard sandy clay, sandy clay with gravel, and clay with gravel to the maximum explored depth of 46.5 feet.

During the investigation, groundwater was not encountered while drilling the three borings. The California Geological Survey, as part of their Seismic Hazards Zone Report (Cupertino Quadrangle) reported the historic high groundwater level in this area as approximately 50 feet bgs.

Based on the analytical results from this limited ESC, none of the material at the Site contains elevated concentrations exceeding State of California or Federal hazardous waste levels. Therefore, material removed from the site during excavation activities will most likely be disposed of as unrestricted waste. If contaminated or hazardous material is encountered during construction, a soil management plan (SMP) and a health and safety (H&S) plan (prepared by others) will be required. The SMP would provide recommended measures to mitigate the long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil. The SMP would also contain contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered. The H&S plan would outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction. Based on the results of this limited ESC, no contaminated or hazardous material was encountered; therefore, no SMP is required at this time.

LIMITATIONS

Descriptions of specific field activities and historical events are based on our observations and on information provided by others. The opinions and information presented in this report apply to Site conditions and the information that was available at the time the work was performed and do not apply to changes of which we are not aware or have not had the opportunity to evaluate. Langan makes no guarantees or warranties with respect to the accuracy or completeness of this information.

We appreciate the opportunity of being of service to you on this project. If you have any questions or require additional information, please call.

Sincerely yours,
Langan Treadwell Rollo

Adam Brown
Peter J Cusack

Adam Brown
Senior Staff Geologist

Peter J. Cusack
Senior Associate/VP

Attachments

770619001.01 PJC

TABLES

Langan Project: 770619001
January 2015

Table 1
Soil Analytical Results for Non-Metals
The Oaks
Cupertino, California

Sample ID	Depth (feet)	Date Sample	TPHg	TPHd	TPHmo	OCPs	PCBs	VOCs	SVOCs
			(mg/kg)						
B-1-2.5	2.5	10-02-2014	< 1.0	< 1.0	< 5.0	ND	ND	–	–
B-1-5.5	5.5	10-02-2014	< 1.0	4.4	17	–	–	ND	ND
B-1-10.5	10.5	10-02-2014	< 1.0	< 1.0	< 5.0	–	–	–	–
B-1-17.5	17.5	10-02-2014	< 1.0	< 1.0	<5.0	–	–	–	–
B-2-3.0	3.0	10-02-2014	< 1.0	< 1.0	< 5.0	ND	ND	–	–
B-2-5.0	5.0	10-02-2014	< 1.0	1.2	8.2	–	–	ND	ND
B-2-10.5	10.5	10-02-2014	< 1.0	< 1.0	< 5.0	–	–	–	–
B-2-15.5	15.5	10-02-2014	< 1.0	< 1.0	< 5.0	–	–	–	–
B-3-3.0	3.0	10-03-2014	< 1.0	< 1.0	< 5.0	ND	ND	–	–
B-3-5.5	5.5	10-03-2014	< 1.0	< 1.0	< 5.0	–	–	–	–
B-3-8.0	8.0	10-03-2014	< 1.0	< 1.0	< 5.0	–	–	–	–
B-3-15.5	15.5	10-03-2014	< 1.0	< 1.0	<5.0	–	–	ND	ND

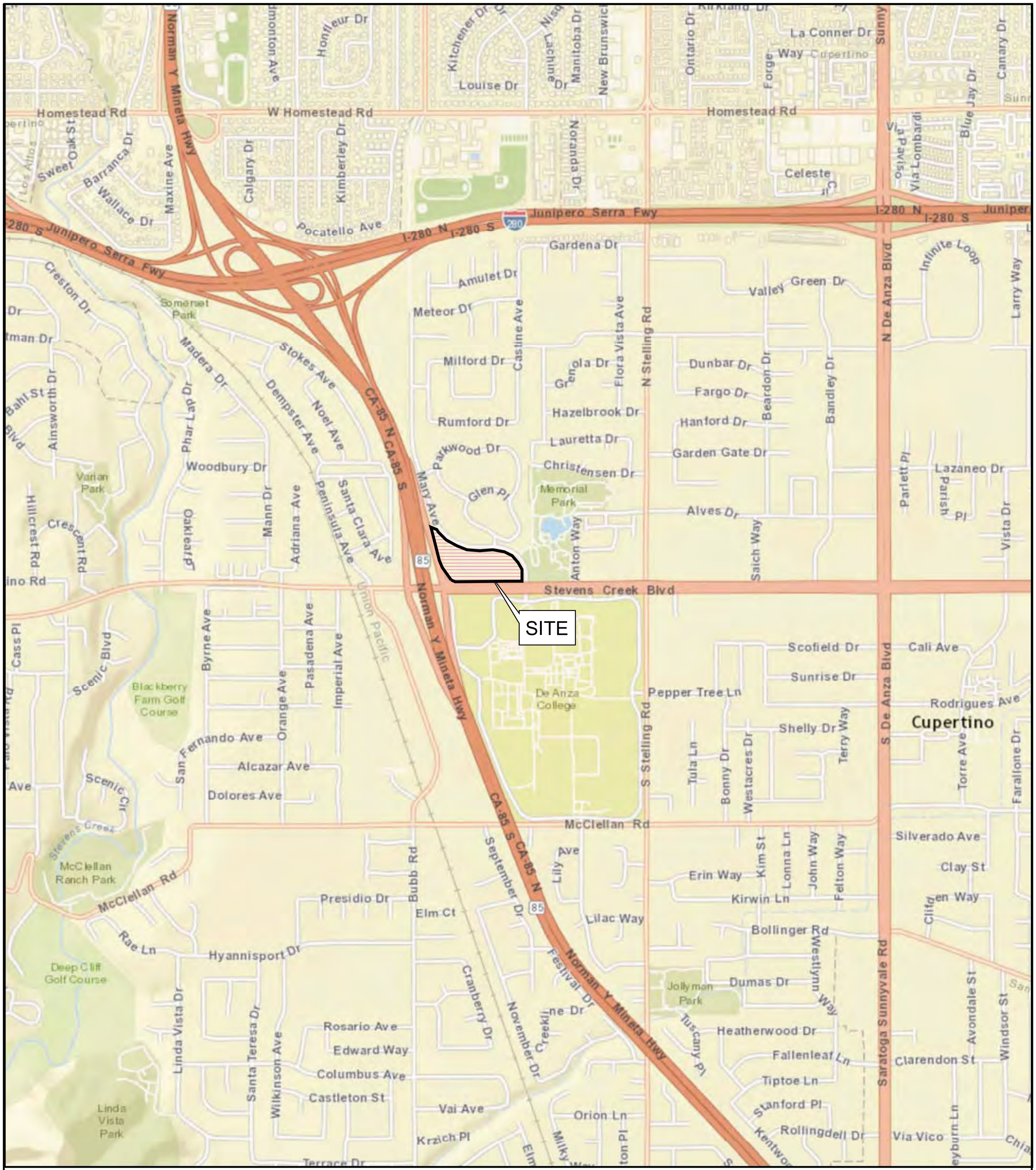
Notes:
mg/kg - milligrams per kilograms
TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M
TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M
TPHmo - Total Petroleum Hydrocarbons as Motor Oil Range, EPA Method 8015M
VOCs - Volatile Organics, EPA Method SW8260B
SVOCs - Semi-Volatile Organics, EPA Method SW8270C
PCBs - Polychlorinated Biphenyls, EPA Method 8081
OCPs - Organochlorine Pesticides, EPA Method 8081
ND - Not detected at or above the laboratory reporting limit
< 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)
– Not analyzed or criteria not established

Table 2
Soil Analytical Results for Metals
The Oaks
Cupertino, California

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	STLC Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			(mg/kg)						(mg/L)	(mg/kg)										
B-1-2.5	2.5	10-02-2014	< 0.5	4.8	100	0.54	< 0.25	57	0.11	17	36	5.7	0.17	1.2	59	< 0.5	< 0.5	< 0.5	78	57
B-1-5.5	5.5	10-02-2014	--	--	--	--	< 0.25	69	0.22	--	--	17	--	--	60	--	--	--	--	62
B-1-10.5	10.5	10-02-2014	< 0.5	4.8	90	< 0.5	< 0.25	81	< 0.05	15	36	6.1	0.066	0.88	89	< 0.5	< 0.5	< 0.5	68	54
B-1-17.5	17.5	10-02-2014	--	--	--	--	< 0.25	56	< 0.05	--	--	6.8	--	--	68	--	--	--	--	66
B-2-3.0	3.0	10-02-2014	--	--	--	--	< 0.25	65	0.057	--	--	6.8	--	--	62	--	--	--	--	59
B-2-5.0	5.0	10-02-2014	--	--	--	--	< 0.25	61	< 0.05	--	--	7.2	--	--	72	--	--	--	--	63
B-2-10.5	10.5	10-02-2014	< 0.5	4.2	99	< 0.5	< 0.25	60	< 0.05	15	38	6.2	0.11	< 0.5	67	< 0.5	< 0.5	< 0.5	62	64
B-2-15.5	15.5	10-02-2014	--	--	--	--	< 0.25	26	--	--	--	5.3	--	--	28	--	--	--	--	38
B-3-3.0	3.0	10-03-2014	0.88	8.1	230	0.79	< 0.25	73	< 0.064	19	40	12	0.13	0.91	82	< 1.0	< 0.5	< 0.5	62	71
B-3-5.5	5.5	10-03-2014	--	--	--	--	< 0.25	42	--	--	--	4.0	--	--	42	--	--	--	--	57
B-3-8.0	8.0	10-03-2014	< 0.5	4.1	100	< 0.5	< 0.25	50	< 0.1	11	33	5.7	0.11	< 0.5	48	< 0.5	< 0.5	< 0.5	55	53
B-3-15.5	15.5	10-03-2014	< 0.5	3.4	83	< 0.5	< 0.25	44	--	11	29	3.9	0.089	< 0.5	43	< 0.5	< 0.5	< 0.5	57	42
Hazardous Waste Criteria																				
TTLC	(mg/kg)		500	500	10,000	75	100	2,500		8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC	(mg/L)		15	5	100	0.75	1	5		80	25	--	0.2	350	20	1	5	7	24	250
TCLP	(mg/L)		--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--

Notes:
mg/kg - milligrams per kilograms
mg/L - milligrams per liter
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg)
-- Not analyzed or criteria not established
TTLC - California Total Threshold Limit Concentration - State hazardous waste criterion
STLC - California Soluble Threshold Limit Concentration
TCLP - Federal Toxicity Characteristic Leaching Procedure

FIGURES



NOTES:

World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online.
Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN.

0 1,000 2,000
Feet

N
W E
S

THE OAKS
Cupertino, California

SITE LOCATION MAP

LANGAN TREADWELL ROLLO

Date 10/09/14	Project No. 770619001	Figure 1

Path: \\langan.com\data\OA\data4\750612403\ArcGIS\ArcMap_Documents\Site Location Map.mxd User: cyoung

EXPLANATION

B-1 ⊕ Approximate location of boring by Langan Treadwell Rollo, October 2014

— - - — Approximate site boundary

0 150 Feet

Approximate scale

Reference: Esri, Digital Globe, GeoEye, i-cubed, USDA, USGS AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and GIS User Community.

THE OAKS
Cupertino, California

LANGAN TREADWELL ROLLO

SITE PLAN

Date 10/09/14	Project No. 770619001	Figure 2

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APPENDIX A

BORING LOGS

PROJECT: **THE OAKS**
Cupertino, California

Log of Boring B-1

PAGE 1 OF 2

Boring location:	See Site Plan, Figure 2
Date started:	10/2/14
Date finished:	10/2/14
Drilling method:	Hollow Stem Auger
Hammer weight/drop:	140 lbs./30 inches
Hammer type:	Automatic
Sampler:	Sprague & Henwood (S&H), Standard Penetration Test (SPT)
Logged by:	M. Lattin

Ground Surface Elevation: 290.5 feet[2]

DEPTH (feet)	SAMPLES: Sampler Type	Sample	Blows/ 6"	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						1.5 inches asphalt concrete (AC)						
1					CL	2 inches aggregate base (AB)						
	BULK	☒				SANDY CLAY with GRAVEL (CL) red-brown, dry, fine gravel up to 3/4 inch in diameter						
2	S&H	■	24 36 29	46								
3						SANDY CLAY with GRAVEL (CL) red-brown to light brown, hard, dry, fine- to medium-grained sand, fine- to coarse subangular gravel up to 2 1/2 inches in diameter					5.1	109
4	BULK	☒			CL							
5												
6	S&H	■	31 49 38	61		increase in clay content						
7						SANDY CLAY (CL) brown, hard, dry, fine-grained sand						
8	S&H	■	29 60 50/ 4"	77/ 10"	CL							
9						SAND with CLAY and GRAVEL (SP-SC) brown, very dense, dry, fine- to coarse-grained sand, fine- to coarse subangular to angular gravel up to 3 inches in diameter, trace fragmented cobbles						
10	S&H	■	12 40 50/ 3"	63/ 9"								
11											3.7	109
12												
13					SP-SC	increase in gravel content and angularity						
14												
15												
16	SPT	●	26 40 21	73								
17	S&H	■	14 21 46	47	SP	SAND (SP) brown, very dense, dry, fine-grained, trace fine angular gravel						
18						CLAY with GRAVEL (CL) brown, hard, dry, fine- to coarse angular gravel up to 1 inch in diameter, some fine- to coarse-grained sand						
19												
20	S&H	■	34 70/ 6"	49/ 6"								
21					CL	increase in gravel size; up to 2.5 inches in diameter to fragmented cobbles						
22												
23												
24						decrease in gravel size up to 1 inch in diameter						
25	S&H	■	47 65/ 6"	46/ 6"		SAND with GRAVEL (SP) brown and yellow, very dense, dry, fine- to coarse-grained sand, fine- to coarse subangular gravel up to 1 inch in diameter					5.3	107
26												
27					SP							
28												
29												
30												

TEST GEOTECH LOG 770619001.GPJ TR.GDT 11/12/14

LANGAN TREADWELL ROLLO

Project No.: 770619001

Figure: A-1a

PROJECT: **THE OAKS**
Cupertino, California

Log of Boring B-1

PAGE 2 OF 2

DEPTH (feet)	Sampler Type	Sample	Blows/ 6"	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	SPT	◩	21 24 31	66	SP	SAND with GRAVEL (SP) (continued)						
32												
33												
34					SM	SILTY SAND (SM) brown, medium dense, moist						
35												
36	SPT	◩	5 5 6	13								
37												
38												
39												
40												
41	S&H	■	9 12 15	19	SC	CLAYEY SAND with GRAVEL (SC) red-brown, medium dense, moist, fine- to coarse-grained sand, fine gravel up to 3/4 inch in diameter					12.1	112
42												
43												
44												
45												
46	S&H	■	10 14 31	32	SW	SAND with GRAVEL (SW) brown, dense, moist, fine- to coarse-grained sand, fine rounded to subrounded gravel up to 1/2 inch in diameter						
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 46.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.

[2] Elevations are based on "Topographic Boundary and Utility Survey" by Kier and Wright, dated March 2003.

LANGAN TREADWELL ROLLO

Project No.: 770619001

Figure: A-1b

PROJECT: **THE OAKS**
Cupertino, California

Log of Boring B-2

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2
Date started: 10/2/14
Date finished: 10/2/14
Drilling method: Hollow Stem Auger
Hammer weight/drop: 140 lbs./30 inches
Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)
Logged by: M. Lattin

DEPTH (feet)	SAMPLES Sampler Type	Sample	Blows/ 6"	SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION Ground Surface Elevation: 296.0 feet[2]	LABORATORY TEST DATA Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						2 inches asphalt concrete (AC)						
1						4 inches aggregate base (AB)						
2	BULK	☒				SAND with CLAY and GRAVEL (SP-SC) brown, very dense, dry, fine- to coarse-grained sand, fine- to coarse gravel up to 1 inch in diameter, trace cobbles						
3	S&H	■	19 29 44	51	SP-SC							
4	S&H BULK	■ ☒	50/ 2"	35/ 2"		decrease in gravel content						
5						SANDY CLAY (CL) brown, hard, dry, fine- to coarse-grained sand, trace fine gravel						
6	SPT	◩	10 20 25	54	CL							
7												
8	SPT	◩	12 16 22	46	SP-SC	SAND with CLAY and GRAVEL (SP-SC) brown, dense, dry, fine- to coarse-grained sand, fine gravel						
9												
10						SAND with GRAVEL (SP) brown, very dense, dry, fine to coarse-grained sand, fine- to coarse subrounded to angular gravel up to 3 inches in diameter, trace fragmented cobbles						
11	S&H	■	30 36 44	56								
12											3.0	115
13												
14					SP							
15												
16	S&H	■	20 28 20	34		dense, increase in gravel content, subrounded to subangular gravel						
17											3.6	111
18												
19						SANDY CLAY with GRAVEL (CL) brown, hard, moist, fine- to coarse-grained sand, fine angular and fragmented gravel up to 1/2 inch in diameter						
20					CL							
21	S&H	■	8 20 34	38								
22					GP-GC	GRAVEL with CLAY and SAND (SP-SC) brown, dense, moist, fine gravel up 1/3 inch diameter, fine- to coarse sand						
23												
24						SANDY CLAY (CL) brown, very stiff, moist, fine-grained sand						
25												
26	S&H	■	8 12 12	17	CL						20.7	94
27												
28												
29					ML	SANDY SILT (ML) brown, very stiff, moist						
30												

LANGAN TREADWELL ROLLO

Project No.: 770619001
Figure: A-2a

PROJECT: **THE OAKS**
Cupertino, California

Log of Boring B-2

PAGE 2 OF 2

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	LABORATORY TEST DATA: Confining Pressure Lbs/Sq Ft	LABORATORY TEST DATA: Shear Strength Lbs/Sq Ft	LABORATORY TEST DATA: Fines %	LABORATORY TEST DATA: Natural Moisture Content, %	LABORATORY TEST DATA: Dry Density Lbs/Cu Ft
	S&H	▨	5 10 14	17		SANDY SILT (ML) (continued)						
31					SC	CLAYEY SAND (SC) brown, medium dense, moist, fine- to coarse-grained sand, some fine gravel up to 1/4 inch in diameter					13.5	110
32												
33												
34					SP	SAND with GRAVEL (SP) brown, medium dense, moist, fine- to coarse-grained sand, fine angular gravel up to 1/2 inch in diameter						
35												
36	S&H	▨	13 19 18	26		SILTY SAND (SM) brown, medium dense, moist, some fine subrounded gravel						
37					SM							
38												
39						SAND with GRAVEL (SP) brown, dense, moist, fine- to coarse-grained sand, fine- to coarse subrounded gravel up to 1 1/2 inches in diameter						
40												
41	S&H	▨	21 28 31	41	SP							
42												
43												
44						SAND (SP) brown, medium dense, moist, fine- to coarse-grained sand, some fine rounded gravel up to 3/4 inch in diameter						
45					SP							
46	S&H	▨	15 20 22	29							4.2	109
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 46.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

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[1] S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.

[2] Elevations are based on "Topographic Boundary and Utility Survey" by Kier and Wright, dated March 2003.

LANGAN TREADWELL ROLLO

Project No.:	Figure:
770619001	A-2b

PROJECT: **THE OAKS**
Cupertino, California

Log of Boring B-3

PAGE 1 OF 2

Boring location:	See Site Plan, Figure 2	Logged by:	M. Lattin
Date started:	10/3/14	Date finished:	10/3/14
Drilling method:	Hollow Stem Auger		
Hammer weight/drop:	140 lbs./30 inches	Hammer type:	Automatic
Sampler:	Sprague & Henwood (S&H), Standard Penetration Test (SPT)		

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION Ground Surface Elevation: 300.5 feet[2]	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						2 inches asphalt concrete (AC)						
1						4 inches aggregate base (AB)						
2	BULK	☒			CL	SANDY CLAY (CL) red-brown, hard, dry, fine-grained sand						
3	S&H	■	26 27 46	51		LL = 23, PI = 9, see Figure B-1 trace fine gravel up to 3/4 inch in diameter						
4						SAND with CLAY and GRAVEL (SP-SC) brown, dense, dry, fine- to coarse-grained sand,						
5	BULK	☒				fine- to coarse subangular to angular gravel up to 1 3/4 inch in diameter						
6	S&H	■	19 25 33	41							6.9	105
7												
8	S&H	■	20 34 35	48	SP-SC							
9												
10												
11	S&H	■	18 26 34	44		dark brown, coarse gravel and fragmented cobbles up to 3 inches in diameter					5.6	109
12												
13												
14						SAND with SILT and GRAVEL (SP-SM) brown, very dense, dry, fine- to coarse-grained subrounded to angular gravel up to 2 3/4 inches in diameter, fine- to coarse-grained sand Sieve Analysis, see Figure B-2						
15												
16	S&H	■	29 44 43	61						8.7	3.8	
17					SP-SM							
18												
19												
20												
21	S&H	■	28 60/ 6"	42/ 6"		increase in sand content						
22	SPT	◩	17 15 14	35	SM	SILTY SAND (SM) brown, dense, dry						
23												
24						SAND with GRAVEL (SP) brown, very dense, moist, fine- to coarse sand, fine- to coarse subrounded gravel up to 2 inches in diameter, with interbedded thin lenses of silt						
25												
26	S&H	■	29 44 48	64								
27					SP							
28												
29												
30												

LANGAN TREADWELL ROLLO

Project No.:	Figure:
770619001	A-3a

PROJECT: **THE OAKS**
Cupertino, California

Log of Boring B-3

PAGE 2 OF 2

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H	▨	48 62 34	67		SAND with GRAVEL (SP) (continued) rounded to subrounded fine gravel up to 1/2 inch in diameter					9.1	108
32					SP							
33												
34												
35						SANDY CLAY (CL) brown, very stiff, moist						
36	SPT	◪	5 9 12	25								
37					CL							
38												
39						SAND with GRAVEL (SP) brown, very dense, moist, fine- to coarse-grained sand, fine- to coarse subangular gravel up to 1 inch in diameter						
40												
41	SPT	◪	11 23 40	76	SP							
42												
43												
44						SANDY CLAY (CL) brown, very stiff, moist						
45					CL							
46	SPT	◪	4 6 11	20		LL = 28, PI = 11, see Figure B-1						
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 46.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.

[1] S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.

[2] Elevations are based on "Topographic Boundary and Utility Survey" by Kier and Wright, dated March 2003.

LANGAN TREADWELL ROLLO

Project No.: 770619001

Figure: A-3b

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size	**Gravels** (More than half of coarse fraction > no. 4 sieve size)	**GW**	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	**SW**	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	**Silts and Clays** LL = < 50	**ML**	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	**MH**	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		**PT**	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	**Grain Size in Millimeters**
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.075 4.76 to 2.00 2.00 to 0.420 0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

▽	Unstabilized groundwater level
▼	Stabilized groundwater level

SAMPLE DESIGNATIONS/SYMBOLS

⊟	Sample taken with Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter. Darkened area indicates soil recovered
◩	Classification sample taken with Standard Penetration Test sampler
◨	Undisturbed sample taken with thin-walled tube
☒	Disturbed sample
◎	Sampling attempted with no recovery
◫	Core sample
▣	Analytical laboratory sample
▥	Sample taken with Direct Push or Drive sampler

SAMPLER TYPE

C	Core barrel
CA	California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter
D&M	Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube
O	Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube
PT	Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube
S&H	Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter
SPT	Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter
ST	Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

THE OAKS
Cupertino, California

LANGAN TREADWELL ROLLO

CLASSIFICATION CHART

Date 10/09/14 | Project No. 770619001 | Figure A-4

APPENDIX B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY REPORTS

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1410373

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #770619001; The Oaks

Project Received: 10/09/2014

Analytical Report reviewed & approved for release on 10/16/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

ACCREDITED IN ACCORDANCE WITH nelac

Glossary of Terms & Qualifier Definitions

Client: Treadwell & Rollo
Project: #770619001; The Oaks
WorkOrder: 1410373

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifiers

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8081A/8082
Date Prepared:	10/9/14	**Unit:**	mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	**1410373-001A**	**Soil**	**10/02/2014**	**GC23**	**96298**

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.0010	1	10/11/2014 02:25
a-BHC	ND	0.0010	1	10/11/2014 02:25
b-BHC	ND	0.0010	1	10/11/2014 02:25
d-BHC	ND	0.0010	1	10/11/2014 02:25
g-BHC	ND	0.0010	1	10/11/2014 02:25
Chlordane (Technical)	ND	0.025	1	10/11/2014 02:25
a-Chlordane	ND	0.0010	1	10/11/2014 02:25
g-Chlordane	ND	0.0010	1	10/11/2014 02:25
p,p-DDD	ND	0.0010	1	10/11/2014 02:25
p,p-DDE	ND	0.0010	1	10/11/2014 02:25
p,p-DDT	ND	0.0010	1	10/11/2014 02:25
Dieldrin	ND	0.0010	1	10/11/2014 02:25
Endosulfan I	ND	0.0010	1	10/11/2014 02:25
Endosulfan II	ND	0.0010	1	10/11/2014 02:25
Endosulfan sulfate	ND	0.0010	1	10/11/2014 02:25
Endrin	ND	0.0010	1	10/11/2014 02:25
Endrin aldehyde	ND	0.0010	1	10/11/2014 02:25
Endrin ketone	ND	0.0010	1	10/11/2014 02:25
Heptachlor	ND	0.0010	1	10/11/2014 02:25
Heptachlor epoxide	ND	0.0010	1	10/11/2014 02:25
Hexachlorobenzene	ND	0.010	1	10/11/2014 02:25
Hexachlorocyclopentadiene	ND	0.020	1	10/11/2014 02:25
Methoxychlor	ND	0.0010	1	10/11/2014 02:25
Toxaphene	ND	0.050	1	10/11/2014 02:25
Aroclor1016	ND	0.050	1	10/11/2014 02:25
Aroclor1221	ND	0.050	1	10/11/2014 02:25
Aroclor1232	ND	0.050	1	10/11/2014 02:25
Aroclor1242	ND	0.050	1	10/11/2014 02:25
Aroclor1248	ND	0.050	1	10/11/2014 02:25
Aroclor1254	ND	0.050	1	10/11/2014 02:25
Aroclor1260	ND	0.050	1	10/11/2014 02:25
PCBs, total	ND	0.050	1	10/11/2014 02:25

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	106	70-130	10/11/2014 02:25

Analyst(s): CK

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8081A/8082
Date Prepared:	10/9/14	**Unit:**	mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-3.0	**1410373-007A**	**Soil**	**10/02/2014**	**GC23**	**96298**

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.0010	1	10/10/2014 23:55
a-BHC	ND	0.0010	1	10/10/2014 23:55
b-BHC	ND	0.0010	1	10/10/2014 23:55
d-BHC	ND	0.0010	1	10/10/2014 23:55
g-BHC	ND	0.0010	1	10/10/2014 23:55
Chlordane (Technical)	ND	0.025	1	10/10/2014 23:55
a-Chlordane	ND	0.0010	1	10/10/2014 23:55
g-Chlordane	ND	0.0010	1	10/10/2014 23:55
p,p-DDD	ND	0.0010	1	10/10/2014 23:55
p,p-DDE	ND	0.0010	1	10/10/2014 23:55
p,p-DDT	ND	0.0010	1	10/10/2014 23:55
Dieldrin	ND	0.0010	1	10/10/2014 23:55
Endosulfan I	ND	0.0010	1	10/10/2014 23:55
Endosulfan II	ND	0.0010	1	10/10/2014 23:55
Endosulfan sulfate	ND	0.0010	1	10/10/2014 23:55
Endrin	ND	0.0010	1	10/10/2014 23:55
Endrin aldehyde	ND	0.0010	1	10/10/2014 23:55
Endrin ketone	ND	0.0010	1	10/10/2014 23:55
Heptachlor	ND	0.0010	1	10/10/2014 23:55
Heptachlor epoxide	ND	0.0010	1	10/10/2014 23:55
Hexachlorobenzene	ND	0.010	1	10/10/2014 23:55
Hexachlorocyclopentadiene	ND	0.020	1	10/10/2014 23:55
Methoxychlor	ND	0.0010	1	10/10/2014 23:55
Toxaphene	ND	0.050	1	10/10/2014 23:55
Aroclor1016	ND	0.050	1	10/10/2014 23:55
Aroclor1221	ND	0.050	1	10/10/2014 23:55
Aroclor1232	ND	0.050	1	10/10/2014 23:55
Aroclor1242	ND	0.050	1	10/10/2014 23:55
Aroclor1248	ND	0.050	1	10/10/2014 23:55
Aroclor1254	ND	0.050	1	10/10/2014 23:55
Aroclor1260	ND	0.050	1	10/10/2014 23:55
PCBs, total	ND	0.050	1	10/10/2014 23:55

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	120	70-130	10/10/2014 23:55

Analyst(s): CK

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8081A/8082
Date Prepared:	10/9/14	**Unit:**	mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3.0	**1410373-012A**	**Soil**	**10/03/2014**	**GC23**	**96298**

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.0010	1	10/11/2014 03:03
a-BHC	ND	0.0010	1	10/11/2014 03:03
b-BHC	ND	0.0010	1	10/11/2014 03:03
d-BHC	ND	0.0010	1	10/11/2014 03:03
g-BHC	ND	0.0010	1	10/11/2014 03:03
Chlordane (Technical)	ND	0.025	1	10/11/2014 03:03
a-Chlordane	ND	0.0010	1	10/11/2014 03:03
g-Chlordane	ND	0.0010	1	10/11/2014 03:03
p,p-DDD	ND	0.0010	1	10/11/2014 03:03
p,p-DDE	ND	0.0010	1	10/11/2014 03:03
p,p-DDT	ND	0.0010	1	10/11/2014 03:03
Dieldrin	ND	0.0010	1	10/11/2014 03:03
Endosulfan I	ND	0.0010	1	10/11/2014 03:03
Endosulfan II	ND	0.0010	1	10/11/2014 03:03
Endosulfan sulfate	ND	0.0010	1	10/11/2014 03:03
Endrin	ND	0.0010	1	10/11/2014 03:03
Endrin aldehyde	ND	0.0010	1	10/11/2014 03:03
Endrin ketone	ND	0.0010	1	10/11/2014 03:03
Heptachlor	ND	0.0010	1	10/11/2014 03:03
Heptachlor epoxide	ND	0.0010	1	10/11/2014 03:03
Hexachlorobenzene	ND	0.010	1	10/11/2014 03:03
Hexachlorocyclopentadiene	ND	0.020	1	10/11/2014 03:03
Methoxychlor	ND	0.0010	1	10/11/2014 03:03
Toxaphene	ND	0.050	1	10/11/2014 03:03
Aroclor1016	ND	0.050	1	10/11/2014 03:03
Aroclor1221	ND	0.050	1	10/11/2014 03:03
Aroclor1232	ND	0.050	1	10/11/2014 03:03
Aroclor1242	ND	0.050	1	10/11/2014 03:03
Aroclor1248	ND	0.050	1	10/11/2014 03:03
Aroclor1254	ND	0.050	1	10/11/2014 03:03
Aroclor1260	ND	0.050	1	10/11/2014 03:03
PCBs, total	ND	0.050	1	10/11/2014 03:03

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	115	70-130	10/11/2014 03:03

Analyst(s): CK

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC10**	**96312**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	10/11/2014 17:26
tert-Amyl methyl ether (TAME)	ND	0.0050	1	10/11/2014 17:26
Benzene	ND	0.0050	1	10/11/2014 17:26
Bromobenzene	ND	0.0050	1	10/11/2014 17:26
Bromochloromethane	ND	0.0050	1	10/11/2014 17:26
Bromodichloromethane	ND	0.0050	1	10/11/2014 17:26
Bromoform	ND	0.0050	1	10/11/2014 17:26
Bromomethane	ND	0.0050	1	10/11/2014 17:26
2-Butanone (MEK)	ND	0.020	1	10/11/2014 17:26
t-Butyl alcohol (TBA)	ND	0.050	1	10/11/2014 17:26
n-Butyl benzene	ND	0.0050	1	10/11/2014 17:26
sec-Butyl benzene	ND	0.0050	1	10/11/2014 17:26
tert-Butyl benzene	ND	0.0050	1	10/11/2014 17:26
Carbon Disulfide	ND	0.0050	1	10/11/2014 17:26
Carbon Tetrachloride	ND	0.0050	1	10/11/2014 17:26
Chlorobenzene	ND	0.0050	1	10/11/2014 17:26
Chloroethane	ND	0.0050	1	10/11/2014 17:26
Chloroform	ND	0.0050	1	10/11/2014 17:26
Chloromethane	ND	0.0050	1	10/11/2014 17:26
2-Chlorotoluene	ND	0.0050	1	10/11/2014 17:26
4-Chlorotoluene	ND	0.0050	1	10/11/2014 17:26
Dibromochloromethane	ND	0.0050	1	10/11/2014 17:26
1,2-Dibromo-3-chloropropane	ND	0.0040	1	10/11/2014 17:26
1,2-Dibromoethane (EDB)	ND	0.0040	1	10/11/2014 17:26
Dibromomethane	ND	0.0050	1	10/11/2014 17:26
1,2-Dichlorobenzene	ND	0.0050	1	10/11/2014 17:26
1,3-Dichlorobenzene	ND	0.0050	1	10/11/2014 17:26
1,4-Dichlorobenzene	ND	0.0050	1	10/11/2014 17:26
Dichlorodifluoromethane	ND	0.0050	1	10/11/2014 17:26
1,1-Dichloroethane	ND	0.0050	1	10/11/2014 17:26
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	10/11/2014 17:26
1,1-Dichloroethene	ND	0.0050	1	10/11/2014 17:26
cis-1,2-Dichloroethene	ND	0.0050	1	10/11/2014 17:26
trans-1,2-Dichloroethene	ND	0.0050	1	10/11/2014 17:26
1,2-Dichloropropane	ND	0.0050	1	10/11/2014 17:26
1,3-Dichloropropane	ND	0.0050	1	10/11/2014 17:26
2,2-Dichloropropane	ND	0.0050	1	10/11/2014 17:26
1,1-Dichloropropene	ND	0.0050	1	10/11/2014 17:26

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC10**	**96312**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	10/11/2014 17:26
trans-1,3-Dichloropropene	ND	0.0050	1	10/11/2014 17:26
Diisopropyl ether (DIPE)	ND	0.0050	1	10/11/2014 17:26
Ethylbenzene	ND	0.0050	1	10/11/2014 17:26
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	10/11/2014 17:26
Freon 113	ND	0.10	1	10/11/2014 17:26
Hexachlorobutadiene	ND	0.0050	1	10/11/2014 17:26
Hexachloroethane	ND	0.0050	1	10/11/2014 17:26
2-Hexanone	ND	0.0050	1	10/11/2014 17:26
Isopropylbenzene	ND	0.0050	1	10/11/2014 17:26
4-Isopropyl toluene	ND	0.0050	1	10/11/2014 17:26
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	10/11/2014 17:26
Methylene chloride	ND	0.0050	1	10/11/2014 17:26
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	10/11/2014 17:26
Naphthalene	ND	0.0050	1	10/11/2014 17:26
n-Propyl benzene	ND	0.0050	1	10/11/2014 17:26
Styrene	ND	0.0050	1	10/11/2014 17:26
1,1,1,2-Tetrachloroethane	ND	0.0050	1	10/11/2014 17:26
1,1,2,2-Tetrachloroethane	ND	0.0050	1	10/11/2014 17:26
Tetrachloroethene	ND	0.0050	1	10/11/2014 17:26
Toluene	ND	0.0050	1	10/11/2014 17:26
1,2,3-Trichlorobenzene	ND	0.0050	1	10/11/2014 17:26
1,2,4-Trichlorobenzene	ND	0.0050	1	10/11/2014 17:26
1,1,1-Trichloroethane	ND	0.0050	1	10/11/2014 17:26
1,1,2-Trichloroethane	ND	0.0050	1	10/11/2014 17:26
Trichloroethene	ND	0.0050	1	10/11/2014 17:26
Trichlorofluoromethane	ND	0.0050	1	10/11/2014 17:26
1,2,3-Trichloropropane	ND	0.0050	1	10/11/2014 17:26
1,2,4-Trimethylbenzene	ND	0.0050	1	10/11/2014 17:26
1,3,5-Trimethylbenzene	ND	0.0050	1	10/11/2014 17:26
Vinyl Chloride	ND	0.0050	1	10/11/2014 17:26
Xylenes, Total	ND	0.0050	1	10/11/2014 17:26

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC10**	**96312**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		10/11/2014 17:26
Toluene-d8	99	70-130		10/11/2014 17:26
4-BFB	104	70-130		10/11/2014 17:26

Analyst(s): KF

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC10**	**96312**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	10/11/2014 18:22
tert-Amyl methyl ether (TAME)	ND	0.0050	1	10/11/2014 18:22
Benzene	ND	0.0050	1	10/11/2014 18:22
Bromobenzene	ND	0.0050	1	10/11/2014 18:22
Bromochloromethane	ND	0.0050	1	10/11/2014 18:22
Bromodichloromethane	ND	0.0050	1	10/11/2014 18:22
Bromoform	ND	0.0050	1	10/11/2014 18:22
Bromomethane	ND	0.0050	1	10/11/2014 18:22
2-Butanone (MEK)	ND	0.020	1	10/11/2014 18:22
t-Butyl alcohol (TBA)	ND	0.050	1	10/11/2014 18:22
n-Butyl benzene	ND	0.0050	1	10/11/2014 18:22
sec-Butyl benzene	ND	0.0050	1	10/11/2014 18:22
tert-Butyl benzene	ND	0.0050	1	10/11/2014 18:22
Carbon Disulfide	ND	0.0050	1	10/11/2014 18:22
Carbon Tetrachloride	ND	0.0050	1	10/11/2014 18:22
Chlorobenzene	ND	0.0050	1	10/11/2014 18:22
Chloroethane	ND	0.0050	1	10/11/2014 18:22
Chloroform	ND	0.0050	1	10/11/2014 18:22
Chloromethane	ND	0.0050	1	10/11/2014 18:22
2-Chlorotoluene	ND	0.0050	1	10/11/2014 18:22
4-Chlorotoluene	ND	0.0050	1	10/11/2014 18:22
Dibromochloromethane	ND	0.0050	1	10/11/2014 18:22
1,2-Dibromo-3-chloropropane	ND	0.0040	1	10/11/2014 18:22
1,2-Dibromoethane (EDB)	ND	0.0040	1	10/11/2014 18:22
Dibromomethane	ND	0.0050	1	10/11/2014 18:22
1,2-Dichlorobenzene	ND	0.0050	1	10/11/2014 18:22
1,3-Dichlorobenzene	ND	0.0050	1	10/11/2014 18:22
1,4-Dichlorobenzene	ND	0.0050	1	10/11/2014 18:22
Dichlorodifluoromethane	ND	0.0050	1	10/11/2014 18:22
1,1-Dichloroethane	ND	0.0050	1	10/11/2014 18:22
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	10/11/2014 18:22
1,1-Dichloroethene	ND	0.0050	1	10/11/2014 18:22
cis-1,2-Dichloroethene	ND	0.0050	1	10/11/2014 18:22
trans-1,2-Dichloroethene	ND	0.0050	1	10/11/2014 18:22
1,2-Dichloropropane	ND	0.0050	1	10/11/2014 18:22
1,3-Dichloropropane	ND	0.0050	1	10/11/2014 18:22
2,2-Dichloropropane	ND	0.0050	1	10/11/2014 18:22
1,1-Dichloropropene	ND	0.0050	1	10/11/2014 18:22

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC10**	**96312**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	10/11/2014 18:22
trans-1,3-Dichloropropene	ND	0.0050	1	10/11/2014 18:22
Diisopropyl ether (DIPE)	ND	0.0050	1	10/11/2014 18:22
Ethylbenzene	ND	0.0050	1	10/11/2014 18:22
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	10/11/2014 18:22
Freon 113	ND	0.10	1	10/11/2014 18:22
Hexachlorobutadiene	ND	0.0050	1	10/11/2014 18:22
Hexachloroethane	ND	0.0050	1	10/11/2014 18:22
2-Hexanone	ND	0.0050	1	10/11/2014 18:22
Isopropylbenzene	ND	0.0050	1	10/11/2014 18:22
4-Isopropyl toluene	ND	0.0050	1	10/11/2014 18:22
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	10/11/2014 18:22
Methylene chloride	ND	0.0050	1	10/11/2014 18:22
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	10/11/2014 18:22
Naphthalene	ND	0.0050	1	10/11/2014 18:22
n-Propyl benzene	ND	0.0050	1	10/11/2014 18:22
Styrene	ND	0.0050	1	10/11/2014 18:22
1,1,1,2-Tetrachloroethane	ND	0.0050	1	10/11/2014 18:22
1,1,2,2-Tetrachloroethane	ND	0.0050	1	10/11/2014 18:22
Tetrachloroethene	ND	0.0050	1	10/11/2014 18:22
Toluene	ND	0.0050	1	10/11/2014 18:22
1,2,3-Trichlorobenzene	ND	0.0050	1	10/11/2014 18:22
1,2,4-Trichlorobenzene	ND	0.0050	1	10/11/2014 18:22
1,1,1-Trichloroethane	ND	0.0050	1	10/11/2014 18:22
1,1,2-Trichloroethane	ND	0.0050	1	10/11/2014 18:22
Trichloroethene	ND	0.0050	1	10/11/2014 18:22
Trichlorofluoromethane	ND	0.0050	1	10/11/2014 18:22
1,2,3-Trichloropropane	ND	0.0050	1	10/11/2014 18:22
1,2,4-Trimethylbenzene	ND	0.0050	1	10/11/2014 18:22
1,3,5-Trimethylbenzene	ND	0.0050	1	10/11/2014 18:22
Vinyl Chloride	ND	0.0050	1	10/11/2014 18:22
Xylenes, Total	ND	0.0050	1	10/11/2014 18:22

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC10**	**96312**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	86	70-130		10/11/2014 18:22
Toluene-d8	93	70-130		10/11/2014 18:22
4-BFB	84	70-130		10/11/2014 18:22

Analyst(s): KF

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Angela Rydelius, Lab Manager

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC38**	**96312**

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	10/15/2014 15:36
tert-Amyl methyl ether (TAME)	ND	0.0050	1	10/15/2014 15:36
Benzene	ND	0.0050	1	10/15/2014 15:36
Bromobenzene	ND	0.0050	1	10/15/2014 15:36
Bromochloromethane	ND	0.0050	1	10/15/2014 15:36
Bromodichloromethane	ND	0.0050	1	10/15/2014 15:36
Bromoform	ND	0.0050	1	10/15/2014 15:36
Bromomethane	ND	0.0050	1	10/15/2014 15:36
2-Butanone (MEK)	ND	0.020	1	10/15/2014 15:36
t-Butyl alcohol (TBA)	ND	0.050	1	10/15/2014 15:36
n-Butyl benzene	ND	0.0050	1	10/15/2014 15:36
sec-Butyl benzene	ND	0.0050	1	10/15/2014 15:36
tert-Butyl benzene	ND	0.0050	1	10/15/2014 15:36
Carbon Disulfide	ND	0.0050	1	10/15/2014 15:36
Carbon Tetrachloride	ND	0.0050	1	10/15/2014 15:36
Chlorobenzene	ND	0.0050	1	10/15/2014 15:36
Chloroethane	ND	0.0050	1	10/15/2014 15:36
Chloroform	ND	0.0050	1	10/15/2014 15:36
Chloromethane	ND	0.0050	1	10/15/2014 15:36
2-Chlorotoluene	ND	0.0050	1	10/15/2014 15:36
4-Chlorotoluene	ND	0.0050	1	10/15/2014 15:36
Dibromochloromethane	ND	0.0050	1	10/15/2014 15:36
1,2-Dibromo-3-chloropropane	ND	0.0040	1	10/15/2014 15:36
1,2-Dibromoethane (EDB)	ND	0.0040	1	10/15/2014 15:36
Dibromomethane	ND	0.0050	1	10/15/2014 15:36
1,2-Dichlorobenzene	ND	0.0050	1	10/15/2014 15:36
1,3-Dichlorobenzene	ND	0.0050	1	10/15/2014 15:36
1,4-Dichlorobenzene	ND	0.0050	1	10/15/2014 15:36
Dichlorodifluoromethane	ND	0.0050	1	10/15/2014 15:36
1,1-Dichloroethane	ND	0.0050	1	10/15/2014 15:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	10/15/2014 15:36
1,1-Dichloroethene	ND	0.0050	1	10/15/2014 15:36
cis-1,2-Dichloroethene	ND	0.0050	1	10/15/2014 15:36
trans-1,2-Dichloroethene	ND	0.0050	1	10/15/2014 15:36
1,2-Dichloropropane	ND	0.0050	1	10/15/2014 15:36
1,3-Dichloropropane	ND	0.0050	1	10/15/2014 15:36
2,2-Dichloropropane	ND	0.0050	1	10/15/2014 15:36
1,1-Dichloropropene	ND	0.0050	1	10/15/2014 15:36

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC38**	**96312**

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	10/15/2014 15:36
trans-1,3-Dichloropropene	ND	0.0050	1	10/15/2014 15:36
Diisopropyl ether (DIPE)	ND	0.0050	1	10/15/2014 15:36
Ethylbenzene	ND	0.0050	1	10/15/2014 15:36
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	10/15/2014 15:36
Freon 113	ND	0.10	1	10/15/2014 15:36
Hexachlorobutadiene	ND	0.0050	1	10/15/2014 15:36
Hexachloroethane	ND	0.0050	1	10/15/2014 15:36
2-Hexanone	ND	0.0050	1	10/15/2014 15:36
Isopropylbenzene	ND	0.0050	1	10/15/2014 15:36
4-Isopropyl toluene	ND	0.0050	1	10/15/2014 15:36
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	10/15/2014 15:36
Methylene chloride	ND	0.0050	1	10/15/2014 15:36
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	10/15/2014 15:36
Naphthalene	ND	0.0050	1	10/15/2014 15:36
n-Propyl benzene	ND	0.0050	1	10/15/2014 15:36
Styrene	ND	0.0050	1	10/15/2014 15:36
1,1,1,2-Tetrachloroethane	ND	0.0050	1	10/15/2014 15:36
1,1,2,2-Tetrachloroethane	ND	0.0050	1	10/15/2014 15:36
Tetrachloroethene	ND	0.0050	1	10/15/2014 15:36
Toluene	ND	0.0050	1	10/15/2014 15:36
1,2,3-Trichlorobenzene	ND	0.0050	1	10/15/2014 15:36
1,2,4-Trichlorobenzene	ND	0.0050	1	10/15/2014 15:36
1,1,1-Trichloroethane	ND	0.0050	1	10/15/2014 15:36
1,1,2-Trichloroethane	ND	0.0050	1	10/15/2014 15:36
Trichloroethene	ND	0.0050	1	10/15/2014 15:36
Trichlorofluoromethane	ND	0.0050	1	10/15/2014 15:36
1,2,3-Trichloropropane	ND	0.0050	1	10/15/2014 15:36
1,2,4-Trimethylbenzene	ND	0.0050	1	10/15/2014 15:36
1,3,5-Trimethylbenzene	ND	0.0050	1	10/15/2014 15:36
Vinyl Chloride	ND	0.0050	1	10/15/2014 15:36
Xylenes, Total	ND	0.0050	1	10/15/2014 15:36

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8260B
Date Prepared:	10/9/14	**Unit:**	mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC38**	**96312**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	97	70-130		10/15/2014 15:36
Toluene-d8	106	70-130		10/15/2014 15:36
4-BFB	98	70-130		10/15/2014 15:36

Analyst(s): AK

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC21**	**96361**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	10/10/2014 21:25
Acenaphthylene	ND	0.25	1	10/10/2014 21:25
Acetochlor	ND	0.25	1	10/10/2014 21:25
Anthracene	ND	0.25	1	10/10/2014 21:25
Benzidine	ND	1.3	1	10/10/2014 21:25
Benzo (a) anthracene	ND	0.25	1	10/10/2014 21:25
Benzo (b) fluoranthene	ND	0.25	1	10/10/2014 21:25
Benzo (k) fluoranthene	ND	0.25	1	10/10/2014 21:25
Benzo (g,h,i) perylene	ND	0.25	1	10/10/2014 21:25
Benzo (a) pyrene	ND	0.25	1	10/10/2014 21:25
Benzyl Alcohol	ND	1.3	1	10/10/2014 21:25
1,1-Biphenyl	ND	0.25	1	10/10/2014 21:25
Bis (2-chloroethoxy) Methane	ND	0.25	1	10/10/2014 21:25
Bis (2-chloroethyl) Ether	ND	0.25	1	10/10/2014 21:25
Bis (2-chloroisopropyl) Ether	ND	0.25	1	10/10/2014 21:25
Bis (2-ethylhexyl) Adipate	ND	0.25	1	10/10/2014 21:25
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	10/10/2014 21:25
4-Bromophenyl Phenyl Ether	ND	0.25	1	10/10/2014 21:25
Butylbenzyl Phthalate	ND	0.25	1	10/10/2014 21:25
4-Chloroaniline	ND	0.25	1	10/10/2014 21:25
4-Chloro-3-methylphenol	ND	0.25	1	10/10/2014 21:25
2-Chloronaphthalene	ND	0.25	1	10/10/2014 21:25
2-Chlorophenol	ND	0.25	1	10/10/2014 21:25
4-Chlorophenyl Phenyl Ether	ND	0.25	1	10/10/2014 21:25
Chrysene	ND	0.25	1	10/10/2014 21:25
Dibenzo (a,h) anthracene	ND	0.25	1	10/10/2014 21:25
Dibenzofuran	ND	0.25	1	10/10/2014 21:25
Di-n-butyl Phthalate	ND	0.25	1	10/10/2014 21:25
1,2-Dichlorobenzene	ND	0.25	1	10/10/2014 21:25
1,3-Dichlorobenzene	ND	0.25	1	10/10/2014 21:25
1,4-Dichlorobenzene	ND	0.25	1	10/10/2014 21:25
3,3-Dichlorobenzidine	ND	0.50	1	10/10/2014 21:25
2,4-Dichlorophenol	ND	0.25	1	10/10/2014 21:25
Diethyl Phthalate	ND	0.25	1	10/10/2014 21:25
2,4-Dimethylphenol	ND	0.25	1	10/10/2014 21:25
Dimethyl Phthalate	ND	0.25	1	10/10/2014 21:25
4,6-Dinitro-2-methylphenol	ND	1.3	1	10/10/2014 21:25
2,4-Dinitrophenol	ND	6.3	1	10/10/2014 21:25

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Angela Rydelius, Lab Manager

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC21**	**96361**

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	0.25	1	10/10/2014 21:25
2,6-Dinitrotoluene	ND	0.25	1	10/10/2014 21:25
Di-n-octyl Phthalate	ND	0.50	1	10/10/2014 21:25
1,2-Diphenylhydrazine	ND	0.25	1	10/10/2014 21:25
Fluoranthene	ND	0.25	1	10/10/2014 21:25
Fluorene	ND	0.25	1	10/10/2014 21:25
Hexachlorobenzene	ND	0.25	1	10/10/2014 21:25
Hexachlorobutadiene	ND	0.25	1	10/10/2014 21:25
Hexachlorocyclopentadiene	ND	1.3	1	10/10/2014 21:25
Hexachloroethane	ND	0.25	1	10/10/2014 21:25
Indeno (1,2,3-cd) pyrene	ND	0.25	1	10/10/2014 21:25
Isophorone	ND	0.25	1	10/10/2014 21:25
2-Methylnaphthalene	ND	0.25	1	10/10/2014 21:25
2-Methylphenol (o-Cresol)	ND	0.25	1	10/10/2014 21:25
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	10/10/2014 21:25
Naphthalene	ND	0.25	1	10/10/2014 21:25
2-Nitroaniline	ND	1.3	1	10/10/2014 21:25
3-Nitroaniline	ND	1.3	1	10/10/2014 21:25
4-Nitroaniline	ND	1.3	1	10/10/2014 21:25
Nitrobenzene	ND	0.25	1	10/10/2014 21:25
2-Nitrophenol	ND	1.3	1	10/10/2014 21:25
4-Nitrophenol	ND	1.3	1	10/10/2014 21:25
N-Nitrosodiphenylamine	ND	0.25	1	10/10/2014 21:25
N-Nitrosodi-n-propylamine	ND	0.25	1	10/10/2014 21:25
Pentachlorophenol	ND	1.3	1	10/10/2014 21:25
Phenanthrene	ND	0.25	1	10/10/2014 21:25
Phenol	ND	0.25	1	10/10/2014 21:25
Pyrene	ND	0.25	1	10/10/2014 21:25
1,2,4-Trichlorobenzene	ND	0.25	1	10/10/2014 21:25
2,4,5-Trichlorophenol	ND	0.25	1	10/10/2014 21:25
2,4,6-Trichlorophenol	ND	0.25	1	10/10/2014 21:25

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC21**	**96361**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	91	30-130		10/10/2014 21:25
Phenol-d5	83	30-130		10/10/2014 21:25
Nitrobenzene-d5	71	30-130		10/10/2014 21:25
2-Fluorobiphenyl	76	30-130		10/10/2014 21:25
2,4,6-Tribromophenol	63	16-130		10/10/2014 21:25
4-Terphenyl-d14	82	30-130		10/10/2014 21:25

Analyst(s): HK

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC17**	**96402**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	10/13/2014 18:04
Acenaphthylene	ND	0.25	1	10/13/2014 18:04
Acetochlor	ND	0.25	1	10/13/2014 18:04
Anthracene	ND	0.25	1	10/13/2014 18:04
Benzidine	ND	1.3	1	10/13/2014 18:04
Benzo (a) anthracene	ND	0.25	1	10/13/2014 18:04
Benzo (b) fluoranthene	ND	0.25	1	10/13/2014 18:04
Benzo (k) fluoranthene	ND	0.25	1	10/13/2014 18:04
Benzo (g,h,i) perylene	ND	0.25	1	10/13/2014 18:04
Benzo (a) pyrene	ND	0.25	1	10/13/2014 18:04
Benzyl Alcohol	ND	1.3	1	10/13/2014 18:04
1,1-Biphenyl	ND	0.25	1	10/13/2014 18:04
Bis (2-chloroethoxy) Methane	ND	0.25	1	10/13/2014 18:04
Bis (2-chloroethyl) Ether	ND	0.25	1	10/13/2014 18:04
Bis (2-chloroisopropyl) Ether	ND	0.25	1	10/13/2014 18:04
Bis (2-ethylhexyl) Adipate	ND	0.25	1	10/13/2014 18:04
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	10/13/2014 18:04
4-Bromophenyl Phenyl Ether	ND	0.25	1	10/13/2014 18:04
Butylbenzyl Phthalate	ND	0.25	1	10/13/2014 18:04
4-Chloroaniline	ND	0.25	1	10/13/2014 18:04
4-Chloro-3-methylphenol	ND	0.25	1	10/13/2014 18:04
2-Chloronaphthalene	ND	0.25	1	10/13/2014 18:04
2-Chlorophenol	ND	0.25	1	10/13/2014 18:04
4-Chlorophenyl Phenyl Ether	ND	0.25	1	10/13/2014 18:04
Chrysene	ND	0.25	1	10/13/2014 18:04
Dibenzo (a,h) anthracene	ND	0.25	1	10/13/2014 18:04
Dibenzofuran	ND	0.25	1	10/13/2014 18:04
Di-n-butyl Phthalate	ND	0.25	1	10/13/2014 18:04
1,2-Dichlorobenzene	ND	0.25	1	10/13/2014 18:04
1,3-Dichlorobenzene	ND	0.25	1	10/13/2014 18:04
1,4-Dichlorobenzene	ND	0.25	1	10/13/2014 18:04
3,3-Dichlorobenzidine	ND	0.50	1	10/13/2014 18:04
2,4-Dichlorophenol	ND	0.25	1	10/13/2014 18:04
Diethyl Phthalate	ND	0.25	1	10/13/2014 18:04
2,4-Dimethylphenol	ND	0.25	1	10/13/2014 18:04
Dimethyl Phthalate	ND	0.25	1	10/13/2014 18:04
4,6-Dinitro-2-methylphenol	ND	1.3	1	10/13/2014 18:04
2,4-Dinitrophenol	ND	6.3	1	10/13/2014 18:04

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC17**	**96402**

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	0.25	1	10/13/2014 18:04
2,6-Dinitrotoluene	ND	0.25	1	10/13/2014 18:04
Di-n-octyl Phthalate	ND	0.50	1	10/13/2014 18:04
1,2-Diphenylhydrazine	ND	0.25	1	10/13/2014 18:04
Fluoranthene	ND	0.25	1	10/13/2014 18:04
Fluorene	ND	0.25	1	10/13/2014 18:04
Hexachlorobenzene	ND	0.25	1	10/13/2014 18:04
Hexachlorobutadiene	ND	0.25	1	10/13/2014 18:04
Hexachlorocyclopentadiene	ND	1.3	1	10/13/2014 18:04
Hexachloroethane	ND	0.25	1	10/13/2014 18:04
Indeno (1,2,3-cd) pyrene	ND	0.25	1	10/13/2014 18:04
Isophorone	ND	0.25	1	10/13/2014 18:04
2-Methylnaphthalene	ND	0.25	1	10/13/2014 18:04
2-Methylphenol (o-Cresol)	ND	0.25	1	10/13/2014 18:04
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	10/13/2014 18:04
Naphthalene	ND	0.25	1	10/13/2014 18:04
2-Nitroaniline	ND	1.3	1	10/13/2014 18:04
3-Nitroaniline	ND	1.3	1	10/13/2014 18:04
4-Nitroaniline	ND	1.3	1	10/13/2014 18:04
Nitrobenzene	ND	0.25	1	10/13/2014 18:04
2-Nitrophenol	ND	1.3	1	10/13/2014 18:04
4-Nitrophenol	ND	1.3	1	10/13/2014 18:04
N-Nitrosodiphenylamine	ND	0.25	1	10/13/2014 18:04
N-Nitrosodi-n-propylamine	ND	0.25	1	10/13/2014 18:04
Pentachlorophenol	ND	1.3	1	10/13/2014 18:04
Phenanthrene	ND	0.25	1	10/13/2014 18:04
Phenol	ND	0.25	1	10/13/2014 18:04
Pyrene	ND	0.25	1	10/13/2014 18:04
1,2,4-Trichlorobenzene	ND	0.25	1	10/13/2014 18:04
2,4,5-Trichlorophenol	ND	0.25	1	10/13/2014 18:04
2,4,6-Trichlorophenol	ND	0.25	1	10/13/2014 18:04

(Cont.)

Angela Rydelius, Lab Manager

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC17**	**96402**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	113	30-130		10/13/2014 18:04
Phenol-d5	98	30-130		10/13/2014 18:04
Nitrobenzene-d5	91	30-130		10/13/2014 18:04
2-Fluorobiphenyl	91	30-130		10/13/2014 18:04
2,4,6-Tribromophenol	79	16-130		10/13/2014 18:04
4-Terphenyl-d14	94	30-130		10/13/2014 18:04

Analyst(s): HK

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC17**	**96361**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	10/11/2014 02:42
Acenaphthylene	ND	0.25	1	10/11/2014 02:42
Acetochlor	ND	0.25	1	10/11/2014 02:42
Anthracene	ND	0.25	1	10/11/2014 02:42
Benzidine	ND	1.3	1	10/11/2014 02:42
Benzo (a) anthracene	ND	0.25	1	10/11/2014 02:42
Benzo (b) fluoranthene	ND	0.25	1	10/11/2014 02:42
Benzo (k) fluoranthene	ND	0.25	1	10/11/2014 02:42
Benzo (g,h,i) perylene	ND	0.25	1	10/11/2014 02:42
Benzo (a) pyrene	ND	0.25	1	10/11/2014 02:42
Benzyl Alcohol	ND	1.3	1	10/11/2014 02:42
1,1-Biphenyl	ND	0.25	1	10/11/2014 02:42
Bis (2-chloroethoxy) Methane	ND	0.25	1	10/11/2014 02:42
Bis (2-chloroethyl) Ether	ND	0.25	1	10/11/2014 02:42
Bis (2-chloroisopropyl) Ether	ND	0.25	1	10/11/2014 02:42
Bis (2-ethylhexyl) Adipate	ND	0.25	1	10/11/2014 02:42
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	10/11/2014 02:42
4-Bromophenyl Phenyl Ether	ND	0.25	1	10/11/2014 02:42
Butylbenzyl Phthalate	ND	0.25	1	10/11/2014 02:42
4-Chloroaniline	ND	0.25	1	10/11/2014 02:42
4-Chloro-3-methylphenol	ND	0.25	1	10/11/2014 02:42
2-Chloronaphthalene	ND	0.25	1	10/11/2014 02:42
2-Chlorophenol	ND	0.25	1	10/11/2014 02:42
4-Chlorophenyl Phenyl Ether	ND	0.25	1	10/11/2014 02:42
Chrysene	ND	0.25	1	10/11/2014 02:42
Dibenzo (a,h) anthracene	ND	0.25	1	10/11/2014 02:42
Dibenzofuran	ND	0.25	1	10/11/2014 02:42
Di-n-butyl Phthalate	ND	0.25	1	10/11/2014 02:42
1,2-Dichlorobenzene	ND	0.25	1	10/11/2014 02:42
1,3-Dichlorobenzene	ND	0.25	1	10/11/2014 02:42
1,4-Dichlorobenzene	ND	0.25	1	10/11/2014 02:42
3,3-Dichlorobenzidine	ND	0.50	1	10/11/2014 02:42
2,4-Dichlorophenol	ND	0.25	1	10/11/2014 02:42
Diethyl Phthalate	ND	0.25	1	10/11/2014 02:42
2,4-Dimethylphenol	ND	0.25	1	10/11/2014 02:42
Dimethyl Phthalate	ND	0.25	1	10/11/2014 02:42
4,6-Dinitro-2-methylphenol	ND	1.3	1	10/11/2014 02:42
2,4-Dinitrophenol	ND	6.3	1	10/11/2014 02:42

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC17**	**96361**

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	0.25	1	10/11/2014 02:42
2,6-Dinitrotoluene	ND	0.25	1	10/11/2014 02:42
Di-n-octyl Phthalate	ND	0.50	1	10/11/2014 02:42
1,2-Diphenylhydrazine	ND	0.25	1	10/11/2014 02:42
Fluoranthene	ND	0.25	1	10/11/2014 02:42
Fluorene	ND	0.25	1	10/11/2014 02:42
Hexachlorobenzene	ND	0.25	1	10/11/2014 02:42
Hexachlorobutadiene	ND	0.25	1	10/11/2014 02:42
Hexachlorocyclopentadiene	ND	1.3	1	10/11/2014 02:42
Hexachloroethane	ND	0.25	1	10/11/2014 02:42
Indeno (1,2,3-cd) pyrene	ND	0.25	1	10/11/2014 02:42
Isophorone	ND	0.25	1	10/11/2014 02:42
2-Methylnaphthalene	ND	0.25	1	10/11/2014 02:42
2-Methylphenol (o-Cresol)	ND	0.25	1	10/11/2014 02:42
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	10/11/2014 02:42
Naphthalene	ND	0.25	1	10/11/2014 02:42
2-Nitroaniline	ND	1.3	1	10/11/2014 02:42
3-Nitroaniline	ND	1.3	1	10/11/2014 02:42
4-Nitroaniline	ND	1.3	1	10/11/2014 02:42
Nitrobenzene	ND	0.25	1	10/11/2014 02:42
2-Nitrophenol	ND	1.3	1	10/11/2014 02:42
4-Nitrophenol	ND	1.3	1	10/11/2014 02:42
N-Nitrosodiphenylamine	ND	0.25	1	10/11/2014 02:42
N-Nitrosodi-n-propylamine	ND	0.25	1	10/11/2014 02:42
Pentachlorophenol	ND	1.3	1	10/11/2014 02:42
Phenanthrene	ND	0.25	1	10/11/2014 02:42
Phenol	ND	0.25	1	10/11/2014 02:42
Pyrene	ND	0.25	1	10/11/2014 02:42
1,2,4-Trichlorobenzene	ND	0.25	1	10/11/2014 02:42
2,4,5-Trichlorophenol	ND	0.25	1	10/11/2014 02:42
2,4,6-Trichlorophenol	ND	0.25	1	10/11/2014 02:42

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8270C
Date Prepared:	10/10/14-10/13/14	**Unit:**	mg/Kg

Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC17**	**96361**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
2-Fluorophenol	89	30-130		10/11/2014 02:42
Phenol-d5	79	30-130		10/11/2014 02:42
Nitrobenzene-d5	76	30-130		10/11/2014 02:42
2-Fluorobiphenyl	78	30-130		10/11/2014 02:42
2,4,6-Tribromophenol	64	16-130		10/11/2014 02:42
4-Terphenyl-d14	77	30-130		10/11/2014 02:42

Analyst(s): HK

Angela Rydelius, Lab Manager

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	**1410373-001A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96308**

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	10/10/2014 23:48
Arsenic	**4.8**	0.50	1	10/10/2014 23:48
Barium	**100**	5.0	1	10/10/2014 23:48
Beryllium	**0.54**	0.50	1	10/10/2014 23:48
Cadmium	ND	0.25	1	10/10/2014 23:48
Chromium	**57**	0.50	1	10/10/2014 23:48
Cobalt	**17**	0.50	1	10/10/2014 23:48
Copper	**36**	0.50	1	10/10/2014 23:48
Lead	**5.7**	0.50	1	10/10/2014 23:48
Mercury	**0.17**	0.050	1	10/10/2014 23:48
Molybdenum	**1.2**	0.50	1	10/10/2014 23:48
Nickel	**59**	0.50	1	10/10/2014 23:48
Selenium	ND	0.50	1	10/10/2014 23:48
Silver	ND	0.50	1	10/10/2014 23:48
Thallium	ND	0.50	1	10/10/2014 23:48
Vanadium	**78**	0.50	1	10/10/2014 23:48
Zinc	**57**	5.0	1	10/10/2014 23:48

Surrogates	REC (%)	Limits	
Tb 350.917	118	70-130	10/10/2014 23:48

Analyst(s): DB

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10.5	**1410373-004A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	10/11/2014 00:01
Arsenic	**4.8**	0.50	1	10/11/2014 00:01
Barium	**90**	5.0	1	10/11/2014 00:01
Beryllium	ND	0.50	1	10/11/2014 00:01
Cadmium	ND	0.25	1	10/11/2014 00:01
Chromium	**81**	0.50	1	10/11/2014 00:01
Cobalt	**15**	0.50	1	10/11/2014 00:01
Copper	**36**	0.50	1	10/11/2014 00:01
Lead	**6.1**	0.50	1	10/11/2014 00:01
Mercury	**0.066**	0.050	1	10/11/2014 00:01
Molybdenum	**0.88**	0.50	1	10/11/2014 00:01
Nickel	**89**	0.50	1	10/11/2014 00:01
Selenium	ND	0.50	1	10/11/2014 00:01
Silver	ND	0.50	1	10/11/2014 00:01
Thallium	ND	0.50	1	10/11/2014 00:01
Vanadium	**68**	0.50	1	10/11/2014 00:01
Zinc	**54**	5.0	1	10/11/2014 00:01

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	103	70-130	10/11/2014 00:01

Analyst(s): DB

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Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10.5	**1410373-009A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	10/11/2014 00:33
Arsenic	**4.2**	0.50	1	10/11/2014 00:33
Barium	**99**	5.0	1	10/11/2014 00:33
Beryllium	ND	0.50	1	10/11/2014 00:33
Cadmium	ND	0.25	1	10/11/2014 00:33
Chromium	**60**	0.50	1	10/11/2014 00:33
Cobalt	**15**	0.50	1	10/11/2014 00:33
Copper	**38**	0.50	1	10/11/2014 00:33
Lead	**6.2**	0.50	1	10/11/2014 00:33
Mercury	**0.11**	0.050	1	10/11/2014 00:33
Molybdenum	ND	0.50	1	10/11/2014 00:33
Nickel	**67**	0.50	1	10/11/2014 00:33
Selenium	ND	0.50	1	10/11/2014 00:33
Silver	ND	0.50	1	10/11/2014 00:33
Thallium	ND	0.50	1	10/11/2014 00:33
Vanadium	**62**	0.50	1	10/11/2014 00:33
Zinc	**64**	5.0	1	10/11/2014 00:33

Surrogates	REC (%)	Limits	
Tb 350.917	106	70-130	10/11/2014 00:33

Analyst(s): DB

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3.0	**1410373-012A**	**Soil/TOTAL**	**10/03/2014**	**ICP-MS2**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Antimony	**0.88**	0.50	1	10/13/2014 22:29
Arsenic	**8.1**	0.50	1	10/13/2014 22:29
Barium	**230**	5.0	1	10/13/2014 22:29
Beryllium	**0.79**	0.50	1	10/13/2014 22:29
Cadmium	ND	0.25	1	10/13/2014 22:29
Chromium	**73**	0.50	1	10/13/2014 22:29
Cobalt	**19**	0.50	1	10/13/2014 22:29
Copper	**40**	0.50	1	10/13/2014 22:29
Lead	**12**	0.50	1	10/13/2014 22:29
Mercury	**0.13**	0.050	1	10/13/2014 22:29
Molybdenum	**0.91**	0.50	1	10/13/2014 22:29
Nickel	**82**	0.50	1	10/13/2014 22:29
Selenium	ND	1.0	1	10/13/2014 22:29
Silver	ND	0.50	1	10/13/2014 22:29
Thallium	ND	0.50	1	10/13/2014 22:29
Vanadium	**62**	0.50	1	10/13/2014 22:29
Zinc	**71**	5.0	1	10/13/2014 22:29

Surrogates	REC (%)	Limits	
Tb 350.917	108	70-130	10/13/2014 22:29

Analyst(s): DB

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-8.0	**1410373-014A**	**Soil/TOTAL**	**10/03/2014**	**ICP-MS2**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	10/13/2014 22:41
Arsenic	**4.1**	0.50	1	10/13/2014 22:41
Barium	**100**	5.0	1	10/13/2014 22:41
Beryllium	ND	0.50	1	10/13/2014 22:41
Cadmium	ND	0.25	1	10/13/2014 22:41
Chromium	**50**	0.50	1	10/13/2014 22:41
Cobalt	**11**	0.50	1	10/13/2014 22:41
Copper	**33**	0.50	1	10/13/2014 22:41
Lead	**5.7**	0.50	1	10/13/2014 22:41
Mercury	**0.11**	0.050	1	10/13/2014 22:41
Molybdenum	ND	0.50	1	10/13/2014 22:41
Nickel	**48**	0.50	1	10/13/2014 22:41
Selenium	ND	0.50	1	10/13/2014 22:41
Silver	ND	0.50	1	10/13/2014 22:41
Thallium	ND	0.50	1	10/13/2014 22:41
Vanadium	**55**	0.50	1	10/13/2014 22:41
Zinc	**53**	5.0	1	10/13/2014 22:41

Surrogates	REC (%)	Limits	
Tb 350.917	105	70-130	10/13/2014 22:41

Analyst(s): DB

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil/TOTAL**	**10/03/2014**	**ICP-MS1**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	10/10/2014 22:46
Arsenic	**3.4**	0.50	1	10/10/2014 22:46
Barium	**83**	5.0	1	10/10/2014 22:46
Beryllium	ND	0.50	1	10/10/2014 22:46
Cadmium	ND	0.25	1	10/10/2014 22:46
Chromium	**44**	0.50	1	10/10/2014 22:46
Cobalt	**11**	0.50	1	10/10/2014 22:46
Copper	**29**	0.50	1	10/10/2014 22:46
Lead	**3.9**	0.50	1	10/10/2014 22:46
Mercury	**0.089**	0.050	1	10/10/2014 22:46
Molybdenum	ND	0.50	1	10/10/2014 22:46
Nickel	**43**	0.50	1	10/10/2014 22:46
Selenium	ND	0.50	1	10/10/2014 22:46
Silver	ND	0.50	1	10/10/2014 22:46
Thallium	ND	0.50	1	10/10/2014 22:46
Vanadium	**57**	0.50	1	10/10/2014 22:46
Zinc	**42**	5.0	1	10/10/2014 22:46

Surrogates	REC (%)	Limits	
Tb 350.917	108	70-130	10/10/2014 22:46

Analyst(s): DB

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/9/14	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	**1410373-001A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 00:44
MTBE	---	0.050	1	10/11/2014 00:44
Benzene	---	0.0050	1	10/11/2014 00:44
Toluene	---	0.0050	1	10/11/2014 00:44
Ethylbenzene	---	0.0050	1	10/11/2014 00:44
Xylenes	---	0.0050	1	10/11/2014 00:44

Surrogates	REC (%)	Limits	
2-Fluorotoluene	108	70-130	10/11/2014 00:44

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/10/2014 21:45
MTBE	---	0.050	1	10/10/2014 21:45
Benzene	---	0.0050	1	10/10/2014 21:45
Toluene	---	0.0050	1	10/10/2014 21:45
Ethylbenzene	---	0.0050	1	10/10/2014 21:45
Xylenes	---	0.0050	1	10/10/2014 21:45

Surrogates	REC (%)	Limits	
2-Fluorotoluene	116	70-130	10/10/2014 21:45

Analyst(s): IA

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/9/14	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10.5	**1410373-004A**	**Soil**	**10/02/2014**	**GC3**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 23:41
MTBE	---	0.050	1	10/11/2014 23:41
Benzene	---	0.0050	1	10/11/2014 23:41
Toluene	---	0.0050	1	10/11/2014 23:41
Ethylbenzene	---	0.0050	1	10/11/2014 23:41
Xylenes	---	0.0050	1	10/11/2014 23:41

Surrogates	REC (%)	Limits	
2-Fluorotoluene	93	70-130	10/11/2014 23:41

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-17.5	**1410373-006A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/10/2014 22:15
MTBE	---	0.050	1	10/10/2014 22:15
Benzene	---	0.0050	1	10/10/2014 22:15
Toluene	---	0.0050	1	10/10/2014 22:15
Ethylbenzene	---	0.0050	1	10/10/2014 22:15
Xylenes	---	0.0050	1	10/10/2014 22:15

Surrogates	REC (%)	Limits	
2-Fluorotoluene	105	70-130	10/10/2014 22:15

Analyst(s): IA

(Cont.)

Angela Rydelius, Lab Manager

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/9/14	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-3.0	**1410373-007A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/10/2014 22:45
MTBE	---	0.050	1	10/10/2014 22:45
Benzene	---	0.0050	1	10/10/2014 22:45
Toluene	---	0.0050	1	10/10/2014 22:45
Ethylbenzene	---	0.0050	1	10/10/2014 22:45
Xylenes	---	0.0050	1	10/10/2014 22:45

Surrogates	REC (%)	Limits	
2-Fluorotoluene	108	70-130	10/10/2014 22:45

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 07:40
MTBE	---	0.050	1	10/11/2014 07:40
Benzene	---	0.0050	1	10/11/2014 07:40
Toluene	---	0.0050	1	10/11/2014 07:40
Ethylbenzene	---	0.0050	1	10/11/2014 07:40
Xylenes	---	0.0050	1	10/11/2014 07:40

Surrogates	REC (%)	Limits	
2-Fluorotoluene	109	70-130	10/11/2014 07:40

Analyst(s): IA

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/9/14	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10.5	**1410373-009A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 03:43
MTBE	---	0.050	1	10/11/2014 03:43
Benzene	---	0.0050	1	10/11/2014 03:43
Toluene	---	0.0050	1	10/11/2014 03:43
Ethylbenzene	---	0.0050	1	10/11/2014 03:43
Xylenes	---	0.0050	1	10/11/2014 03:43

Surrogates	REC (%)	Limits	
2-Fluorotoluene	104	70-130	10/11/2014 03:43

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-15.5	**1410373-010A**	**Soil**	**10/02/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 03:13
MTBE	---	0.050	1	10/11/2014 03:13
Benzene	---	0.0050	1	10/11/2014 03:13
Toluene	---	0.0050	1	10/11/2014 03:13
Ethylbenzene	---	0.0050	1	10/11/2014 03:13
Xylenes	---	0.0050	1	10/11/2014 03:13

Surrogates	REC (%)	Limits	
2-Fluorotoluene	108	70-130	10/11/2014 03:13

Analyst(s): IA

(Cont.)

Angela Rydelius, Lab Manager

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/9/14	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3.0	**1410373-012A**	**Soil**	**10/03/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 12:39
MTBE	---	0.050	1	10/11/2014 12:39
Benzene	---	0.0050	1	10/11/2014 12:39
Toluene	---	0.0050	1	10/11/2014 12:39
Ethylbenzene	---	0.0050	1	10/11/2014 12:39
Xylenes	---	0.0050	1	10/11/2014 12:39

Surrogates	REC (%)	Limits	
2-Fluorotoluene	105	70-130	10/11/2014 12:39

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5	**1410373-013A**	**Soil**	**10/03/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 06:41
MTBE	---	0.050	1	10/11/2014 06:41
Benzene	---	0.0050	1	10/11/2014 06:41
Toluene	---	0.0050	1	10/11/2014 06:41
Ethylbenzene	---	0.0050	1	10/11/2014 06:41
Xylenes	---	0.0050	1	10/11/2014 06:41

Surrogates	REC (%)	Limits	
2-Fluorotoluene	100	70-130	10/11/2014 06:41

Analyst(s): IA

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW5030B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	10/9/14	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-8.0	**1410373-014A**	**Soil**	**10/03/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 07:10
MTBE	---	0.050	1	10/11/2014 07:10
Benzene	---	0.0050	1	10/11/2014 07:10
Toluene	---	0.0050	1	10/11/2014 07:10
Ethylbenzene	---	0.0050	1	10/11/2014 07:10
Xylenes	---	0.0050	1	10/11/2014 07:10

Surrogates	REC (%)	Limits	
2-Fluorotoluene	109	70-130	10/11/2014 07:10

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC7**	**96311**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	10/11/2014 01:14
MTBE	---	0.050	1	10/11/2014 01:14
Benzene	---	0.0050	1	10/11/2014 01:14
Toluene	---	0.0050	1	10/11/2014 01:14
Ethylbenzene	---	0.0050	1	10/11/2014 01:14
Xylenes	---	0.0050	1	10/11/2014 01:14

Surrogates	REC (%)	Limits	
2-Fluorotoluene	100	70-130	10/11/2014 01:14

Analyst(s): IA

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96308**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	10/10/2014 23:54
Chromium	**69**	0.50	1	10/10/2014 23:54
Lead	**17**	0.50	1	10/10/2014 23:54
Nickel	**60**	0.50	1	10/10/2014 23:54
Zinc	**62**	5.0	1	10/10/2014 23:54

Surrogates	REC (%)	Limits		
Tb 350.917	123	70-130		10/10/2014 23:54

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-17.5	**1410373-006A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	10/11/2014 00:20
Chromium	**56**	0.50	1	10/11/2014 00:20
Lead	**6.8**	0.50	1	10/11/2014 00:20
Nickel	**68**	0.50	1	10/11/2014 00:20
Zinc	**66**	5.0	1	10/11/2014 00:20

Surrogates	REC (%)	Limits		
Tb 350.917	104	70-130		10/11/2014 00:20

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-3.0	**1410373-007A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	10/11/2014 00:27
Chromium	**65**	0.50	1	10/11/2014 00:27
Lead	**6.8**	0.50	1	10/11/2014 00:27
Nickel	**62**	0.50	1	10/11/2014 00:27
Zinc	**59**	5.0	1	10/11/2014 00:27

Surrogates	REC (%)	Limits		
Tb 350.917	109	70-130		10/11/2014 00:27

Analyst(s): DB

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3050B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/9/14	**Unit:**	mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS2**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	10/13/2014 22:23
Chromium	**61**	0.50	1	10/13/2014 22:23
Lead	**7.2**	0.50	1	10/13/2014 22:23
Nickel	**72**	0.50	1	10/13/2014 22:23
Zinc	**63**	5.0	1	10/13/2014 22:23

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	105	70-130	10/13/2014 22:23

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-15.5	**1410373-010A**	**Soil/TOTAL**	**10/02/2014**	**ICP-MS1**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	10/11/2014 00:39
Chromium	**26**	0.50	1	10/11/2014 00:39
Lead	**5.3**	0.50	1	10/11/2014 00:39
Nickel	**28**	0.50	1	10/11/2014 00:39
Zinc	**38**	5.0	1	10/11/2014 00:39

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	109	70-130	10/11/2014 00:39

Analyst(s): DB

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5	**1410373-013A**	**Soil/TOTAL**	**10/03/2014**	**ICP-MS2**	**96316**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	10/13/2014 22:35
Chromium	**42**	0.50	1	10/13/2014 22:35
Lead	**4.0**	0.50	1	10/13/2014 22:35
Nickel	**42**	0.50	1	10/13/2014 22:35
Zinc	**57**	5.0	1	10/13/2014 22:35

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	101	70-130	10/13/2014 22:35

Analyst(s): DB

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8015B
Date Prepared:	10/9/14-10/14/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	**1410373-001A**	**Soil**	**10/02/2014**	**GC6B**	**96403**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/16/2014 07:58
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/16/2014 07:58

Surrogates	REC (%)	Limits	Date Analyzed
C9	104	70-130	10/16/2014 07:58

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil**	**10/02/2014**	**GC6B**	**96403**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**4.4**	1.0	1	10/16/2014 09:10
TPH-Motor Oil (C18-C36)	**17**	5.0	1	10/16/2014 09:10

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	105	70-130	10/16/2014 09:10

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10.5	**1410373-004A**	**Soil**	**10/02/2014**	**GC11B**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/15/2014 00:14
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/15/2014 00:14

Surrogates	REC (%)	Limits	Date Analyzed
C9	105	70-130	10/15/2014 00:14

Analyst(s): TK

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8015B
Date Prepared:	10/9/14-10/14/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-17.5	**1410373-006A**	**Soil**	**10/02/2014**	**GC6A**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/11/2014 14:10
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/11/2014 14:10

Surrogates	REC (%)	Limits	Date Analyzed
C9	95	70-130	10/11/2014 14:10

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-3.0	**1410373-007A**	**Soil**	**10/02/2014**	**GC11B**	**96383**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/14/2014 19:40
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/11/2014 20:08

Surrogates	REC (%)	Limits	Date Analyzed
C9	114	70-130	10/11/2014 20:08

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil**	**10/02/2014**	**GC2B**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.2**	1.0	1	10/11/2014 01:29
TPH-Motor Oil (C18-C36)	**8.2**	5.0	1	10/11/2014 01:29

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	Date Analyzed
C9	116	70-130		10/11/2014 01:29

Analyst(s): MAM

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8015B
Date Prepared:	10/9/14-10/14/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10.5	**1410373-009A**	**Soil**	**10/02/2014**	**GC2B**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/10/2014 20:24
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/10/2014 20:24

Surrogates	REC (%)	Limits	
C9	110	70-130	10/10/2014 20:24

Analyst(s): MAM

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-15.5	**1410373-010A**	**Soil**	**10/02/2014**	**GC2B**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/10/2014 22:57
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/10/2014 22:57

Surrogates	REC (%)	Limits	
C9	109	70-130	10/10/2014 22:57

Analyst(s): MAM

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3.0	**1410373-012A**	**Soil**	**10/03/2014**	**GC6B**	**96403**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/16/2014 06:47
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/16/2014 06:47

Surrogates	REC (%)	Limits	
C9	108	70-130	10/16/2014 06:47

Analyst(s): TK

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	SW3550B
Date Received:	10/9/14 21:28	**Analytical Method:**	SW8015B
Date Prepared:	10/9/14-10/14/14	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5	**1410373-013A**	**Soil**	**10/03/2014**	**GC2B**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/10/2014 21:40
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/10/2014 21:40

Surrogates	REC (%)	Limits	Date Analyzed
C9	110	70-130	10/10/2014 21:40

Analyst(s): MAM

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-8.0	**1410373-014A**	**Soil**	**10/03/2014**	**GC9b**	**96310**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/12/2014 00:54
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/12/2014 00:54

Surrogates	REC (%)	Limits	Date Analyzed
C9	114	70-130	10/12/2014 00:54

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-15.5	**1410373-016A**	**Soil**	**10/03/2014**	**GC6A**	**96315**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	10/11/2014 19:00
TPH-Motor Oil (C18-C36)	ND	5.0	1	10/11/2014 19:00

Surrogates	REC (%)	Limits	Date Analyzed
C9	89	70-130	10/11/2014 19:00

Analyst(s): TK

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96298
Date Analyzed:	10/10/14	**Extraction Method:**	SW3550B
Instrument:	GC23	**Analytical Method:**	SW8081A/8082
Matrix:	Soil	**Unit:**	mg/kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96298

QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0521	0.0010	0.050	-	104	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.0626	0.0010	0.050	-	125	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.0496	0.0010	0.050	-	99	70-130
Dieldrin	ND	0.0578	0.0010	0.050	-	116	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.0543	0.0010	0.050	-	109	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.0495	0.0010	0.050	-	99	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
Surrogate Recovery							
Decachlorobiphenyl	0.0624	0.0614		0.050	125	123	70-130

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96312
Date Analyzed:	10/11/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96312 1410370-013AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0396	0.0050	0.050	-	79	55-106
Benzene	ND	0.0499	0.0050	0.050	-	100	69-118
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.185	0.050	0.20	-	93	63-117
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0485	0.0050	0.050	-	97	74-117
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0492	0.0040	0.050	-	98	58-120
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0498	0.0040	0.050	-	100	70-113
1,1-Dichloroethene	ND	0.0450	0.0050	0.050	-	90	61-124
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96312
Date Analyzed:	10/11/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96312 1410370-013AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0438	0.0050	0.050	-	88	71-111
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0419	0.0050	0.050	-	84	67-108
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0424	0.0050	0.050	-	85	58-113
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0491	0.0050	0.050	-	98	73-125
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0480	0.0050	0.050	-	96	73-118
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.136	0.135		0.12	109	108	70-130
Toluene-d8	0.114	0.115		0.12	91	92	70-130
4-BFB	0.0118	0.0121		0.012	94	97	70-130

(Cont.)

QA/QC Officer

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96312
Date Analyzed:	10/11/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96312 1410370-013AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0275	0.0284	0.050	ND	55,F1	57,F1	70-130	3.02	30
Benzene	0.0327	0.0336	0.050	ND	65,F1	67,F1	70-130	2.91	30
t-Butyl alcohol (TBA)	0.117	0.132	0.20	ND	58,F1	66,F1	70-130	12.8	30
Chlorobenzene	0.0364	0.0380	0.050	ND	73	76	70-130	4.27	30
1,2-Dibromoethane (EDB)	0.0337	0.0342	0.050	ND	67,F1	68,F1	70-130	1.53	30
1,2-Dichloroethane (1,2-DCA)	0.0310	0.0317	0.050	ND	62,F1	63,F1	70-130	2.22	30
1,1-Dichloroethene	0.0303	0.0307	0.050	ND	61,F1	61,F1	70-130	0	30
Diisopropyl ether (DIPE)	0.0267	0.0275	0.050	ND	53,F1	55,F1	70-130	2.86	30
Ethyl tert-butyl ether (ETBE)	0.0279	0.0283	0.050	ND	56,F1	57,F1	70-130	1.22	30
Methyl-t-butyl ether (MTBE)	0.0288	0.0301	0.050	ND	58,F1	60,F1	70-130	4.59	30
Toluene	0.0354	0.0368	0.050	ND	71	74	70-130	3.89	30
Trichloroethene	0.0351	0.0352	0.050	ND	70	70	70-130	0	30
Surrogate Recovery									
Dibromofluoromethane	0.111	0.109	0.12		89	87	70-130	1.98	30
Toluene-d8	0.117	0.116	0.12		93	93	70-130	0	30
4-BFB	0.0102	0.0106	0.012		82	85	70-130	3.36	30

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Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/10/14	**BatchID:**	96361
Date Analyzed:	10/10/14 - 10/14/14	**Extraction Method:**	SW3550B
Instrument:	GC21	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96361 1410361-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	4.61	0.25	5	-	92	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	5.90	0.25	5	-	118	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	5.96	0.25	5	-	119	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	4.67	0.25	5	-	93	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.72	0.25	5	-	94	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

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Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/10/14	**BatchID:**	96361
Date Analyzed:	10/10/14 - 10/14/14	**Extraction Method:**	SW3550B
Instrument:	GC21	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96361 1410361-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.98	1.3	5	-	80	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.42	0.25	5	-	88	30-130
Pentachlorophenol	ND	4.69	1.3	5	-	94	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	5.45	0.25	5	-	109	30-130
Pyrene	ND	5.11	0.25	5	-	102	30-130
1,2,4-Trichlorobenzene	ND	5.77	0.25	5	-	115	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-
Surrogate Recovery							
2-Fluorophenol	4.60	4.74		5	92	95	30-130
Phenol-d5	4.18	4.33		5	84	87	30-130
Nitrobenzene-d5	3.85	4.28		5	77	86	30-130
2-Fluorobiphenyl	4.19	4.16		5	84	83	30-130
2,4,6-Tribromophenol	3.26	3.42		5	65	68	16-130
4-Terphenyl-d14	4.42	4.59		5	88	92	30-130

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Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/10/14	**BatchID:**	96361
Date Analyzed:	10/10/14 - 10/14/14	**Extraction Method:**	SW3550B
Instrument:	GC21	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96361 1410361-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
Surrogate Recovery									
2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	

(Cont.)

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/13/14	**BatchID:**	96402
Date Analyzed:	10/13/14	**Extraction Method:**	SW3550B
Instrument:	GC17	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96402 1410420-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	4.72	0.25	5	-	94	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	5.23	0.25	5	-	105	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	5.36	0.25	5	-	107	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	4.81	0.25	5	-	96	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	5.51	0.25	5	-	110	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

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Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/13/14	**BatchID:**	96402
Date Analyzed:	10/13/14	**Extraction Method:**	SW3550B
Instrument:	GC17	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96402 1410420-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	4.58	1.3	5	-	92	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.94	0.25	5	-	79	30-130
Pentachlorophenol	ND	7.12	1.3	5	-	142, F2	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.93	0.25	5	-	99	30-130
Pyrene	ND	5.03	0.25	5	-	101	30-130
1,2,4-Trichlorobenzene	ND	5.75	0.25	5	-	115	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-
Surrogate Recovery							
2-Fluorophenol	5.34	4.83		5	107	97	30-130
Phenol-d5	4.83	4.32		5	97	86	30-130
Nitrobenzene-d5	4.80	4.76		5	96	95	30-130
2-Fluorobiphenyl	4.78	4.65		5	96	93	30-130
2,4,6-Tribromophenol	3.83	4.42		5	77	88	16-130
4-Terphenyl-d14	4.95	4.90		5	99	98	30-130

(Cont.)

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/13/14	**BatchID:**	96402
Date Analyzed:	10/13/14	**Extraction Method:**	SW3550B
Instrument:	GC17	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96402 1410420-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<2	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<2	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<2	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<2	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<2	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<10	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<2	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
Phenol	NR	NR	0	ND<2	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<2	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<2	NR	NR	-	NR	
Surrogate Recovery									
2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96308
Date Analyzed:	10/10/14	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96308 1410367-017AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	52.6	0.50	50	-	105	75-125
Arsenic	ND	54.1	0.50	50	-	108	75-125
Barium	ND	522	5.0	500	-	104	75-125
Beryllium	ND	54.2	0.50	50	-	108	75-125
Cadmium	ND	54.7	0.25	50	-	109	75-125
Chromium	ND	51.9	0.50	50	-	104	75-125
Cobalt	ND	55.5	0.50	50	-	111	75-125
Copper	ND	53.6	0.50	50	-	107	75-125
Lead	ND	55.3	0.50	50	-	111	75-125
Mercury	ND	1.22	0.050	1.25	-	97	75-125
Molybdenum	ND	52.5	0.50	50	-	105	75-125
Nickel	ND	53.3	0.50	50	-	107	75-125
Selenium	ND	55.8	0.50	50	-	112	75-125
Silver	ND	56.1	0.50	50	-	112	75-125
Thallium	ND	50.2	0.50	50	-	100	75-125
Vanadium	ND	52.3	0.50	50	-	105	75-125
Zinc	ND	534	5.0	500	-	107	75-125
Surrogate Recovery							
Tb 350.917	578	559		500	116	112	70-130

(Cont.)

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96308
Date Analyzed:	10/10/14	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96308 1410367-017AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	52.4	48.9	50	0.9178	103	96	75-125	6.85	20
Arsenic	60.4	57.2	50	7.658	105	99	75-125	5.43	20
Barium	780	682	500	217.5	113	93	75-125	13.4	20
Beryllium	50.2	48.3	50	ND	100	96	75-125	3.82	20
Cadmium	53.0	50.2	50	ND	106	100	75-125	5.44	20
Chromium	NR	NR	50	52.80	NR	NR	75-125	NR	20
Cobalt	61.4	60.7	50	12.65	98	96	75-125	1.10	20
Copper	75.4	71.9	50	23.71	103	96	75-125	4.77	20
Lead	NR	NR	50	77.38	NR	NR	75-125	NR	20
Mercury	1.72	1.45	1.25	0.4757	100	78	75-125	17.0	20
Molybdenum	51.3	49.3	50	1.325	100	96	75-125	3.97	20
Nickel	NR	NR	50	89.76	NR	NR	75-125	NR	20
Selenium	52.2	49.5	50	ND	104	98	75-125	5.37	20
Silver	52.2	51.6	50	ND	104	103	75-125	1.23	20
Thallium	51.1	47.0	50	ND	102	94	75-125	8.52	20
Vanadium	84.4	81.2	50	38.72	91	85	75-125	3.80	20
Zinc	631	606	500	108.6	105	100	75-125	4.02	20
Surrogate Recovery									
Tb 350.917	551	530	500		110	106	70-130	4.00	20

(Cont.)

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96316
Date Analyzed:	10/10/14	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96316 1410373-016AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	42.4	0.50	50	-	85	75-125
Arsenic	ND	53.5	0.50	50	-	107	75-125
Barium	ND	501	5.0	500	-	100	75-125
Beryllium	ND	50.0	0.50	50	-	100	75-125
Cadmium	ND	52.0	0.25	50	-	104	75-125
Chromium	ND	50.5	0.50	50	-	101	75-125
Cobalt	ND	52.9	0.50	50	-	106	75-125
Copper	ND	51.2	0.50	50	-	102	75-125
Lead	ND	52.5	0.50	50	-	105	75-125
Mercury	ND	0.961	0.050	1.25	-	77	75-125
Molybdenum	ND	42.4	0.50	50	-	85	75-125
Nickel	ND	51.5	0.50	50	-	103	75-125
Selenium	ND	52.6	0.50	50	-	105	75-125
Silver	ND	53.6	0.50	50	-	107	75-125
Thallium	ND	47.8	0.50	50	-	96	75-125
Vanadium	ND	50.5	0.50	50	-	101	75-125
Zinc	ND	508	5.0	500	-	101	75-125
Surrogate Recovery							
Tb 350.917	630	527		500	126	105	70-130

(Cont.)

QA/QC Officer

Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 10/9/14
Date Analyzed: 10/10/14
Instrument: ICP-MS1
Matrix: Soil
Project: #770619001; The Oaks

WorkOrder: 1410373
BatchID: 96316
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-96316
1410373-016AMS/MSD

QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	54.0	50.2	50	ND	107	100	75-125	7.16	20
Arsenic	60.9	59.8	50	3.408	115	113	75-125	1.76	20
Barium	669	614	500	83.05	117	106	75-125	8.48	20
Beryllium	49.7	45.3	50	ND	99	90	75-125	9.24	20
Cadmium	56.2	51.9	50	ND	112	103	75-125	7.99	20
Chromium	98.3	101	50	43.92	109	114	75-125	2.64	20
Cobalt	67.0	62.8	50	10.92	112	104	75-125	6.52	20
Copper	87.2	86.8	50	28.54	117	116	75-125	0.540	20
Lead	61.4	57.6	50	3.917	115	107	75-125	6.39	20
Mercury	1.29	1.29	1.25	0.08940	96	96	75-125	0	20
Molybdenum	55.0	50.7	50	ND	109	101	75-125	8.12	20
Nickel	104	108	50	43.46	122	129,F1	75-125	3.39	20
Selenium	55.5	52.3	50	ND	110	104	75-125	5.82	20
Silver	57.7	53.5	50	ND	115	107	75-125	7.61	20
Thallium	51.5	47.4	50	ND	103	95	75-125	8.35	20
Vanadium	111	112	50	57.44	108	110	75-125	0.716	20
Zinc	582	556	500	41.84	108	103	75-125	4.73	20
Surrogate Recovery									
Tb 350.917	575	524	500		115	105	70-130	9.22	20

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96311
Date Analyzed:	10/10/14	**Extraction Method:**	SW5030B
Instrument:	GC7	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96311 1410370-014AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.659	0.40	0.60	-	110	70-130
MTBE	ND	0.0888	0.050	0.10	-	89	70-130
Benzene	ND	0.109	0.0050	0.10	-	109	70-130
Toluene	ND	0.108	0.0050	0.10	-	108	70-130
Ethylbenzene	ND	0.114	0.0050	0.10	-	114	70-130
Xylenes	ND	0.352	0.0050	0.30	-	117	70-130
Surrogate Recovery							
2-Fluorotoluene	0.109	0.107		0.10	109	107	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.632	0.669	0.60	ND	105	112	70-130	5.77	20
MTBE	0.0875	0.0897	0.10	ND	88	90	70-130	2.47	20
Benzene	0.101	0.110	0.10	ND	101	110	70-130	8.27	20
Toluene	0.101	0.110	0.10	ND	101	109	70-130	8.27	20
Ethylbenzene	0.107	0.116	0.10	ND	107	116	70-130	8.20	20
Xylenes	0.336	0.364	0.30	ND	112	121	70-130	8.06	20
Surrogate Recovery									
2-Fluorotoluene	0.0991	0.108	0.10		99	108	70-130	8.57	20

QA/QC Officer

Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 10/9/14
Date Analyzed: 10/11/14 - 10/16/14
Instrument: GC11A, GC9a
Matrix: Soil
Project: #770619001; The Oaks

WorkOrder: 1410373
BatchID: 96310
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-96310

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	47.8	1.0	40	-	120	70-130
Surrogate Recovery							
C9	28.6	28.8		25	115	115	70-130

(Cont.)

QA/QC Officer

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/9/14	**BatchID:**	96315
Date Analyzed:	10/10/14 - 10/13/14	**Extraction Method:**	SW3550B
Instrument:	GC11A, GC6A	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96315 1410373-016AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	46.6	1.0	40	-	114	70-130
Surrogate Recovery							
C9	21.1	28.7		25	84	115	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	46.9	46.1	40	ND	115	113	70-130	1.84	30
Surrogate Recovery									
C9	29.2	29.3	25		117	117	70-130	0	30

(Cont.)

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/11/14	**BatchID:**	96383
Date Analyzed:	10/12/14 - 10/14/14	**Extraction Method:**	SW3550B
Instrument:	GC11A, GC2B	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96383

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	42.8	1.0	40	-	107	70-130
Surrogate Recovery							
C9	29.4	27.6		25	117	110	70-130

(Cont.)

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/13/14	**BatchID:**	96403
Date Analyzed:	10/14/14	**Extraction Method:**	SW3550B
Instrument:	GC6B	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96403 1410256-001AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	45.7	1.0	40	-	112	70-130
Surrogate Recovery							
C9	25.0	28.3		25	100	113	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR	0	28	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR	0		NR	NR	-	NR	

QA/QC Officer

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1410373 **ClientCode: TWRF**

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Report to:
Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO:
ProjectNo: #770619001; The Oaks

Bill to:
Accounts Payable
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concursolut

Requested TAT: **5 days**

Date Received: **10/09/2014**
Date Printed: **10/13/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1410373-001	B-1-2.5	Soil	10/2/2014	☐	A			A	A							
1410373-002	B-1-5.5	Soil	10/2/2014	☐		A	A		A	A						
1410373-004	B-1-10.5	Soil	10/2/2014	☐				A	A							
1410373-006	B-1-17.5	Soil	10/2/2014	☐					A	A						
1410373-007	B-2-3.0	Soil	10/2/2014	☐	A				A	A						
1410373-008	B-2-5.0	Soil	10/2/2014	☐		A	A		A	A						
1410373-009	B-2-10.5	Soil	10/2/2014	☐				A	A							
1410373-010	B-2-15.5	Soil	10/2/2014	☐					A	A						
1410373-012	B-3-3.0	Soil	10/3/2014	☐	A			A	A							
1410373-013	B-3-5.5	Soil	10/3/2014	☐					A	A						
1410373-014	B-3-8.0	Soil	10/3/2014	☐				A	A							
1410373-016	B-3-15.5	Soil	10/3/2014	☐		A	A	A	A							

Test Legend:

1	**8081PCB_S**	**2**	**8260B_S**	**3**	**8270D_S**	**4**	**CAM17MS_S**	**5**	**G-MBTEX_S**
6	**LUFTMS_S**	**7**		**8**		**9**		**10**	
11		**12**							

The following SampIDs: 001A, 002A, 004A, 006A, 007A, 008A, 009A, 010A, 012A, 013A, 014A, 016A contain testgroup.

Prepared by: Ana Venegas

Comments: SEND HARD COPY/ Always notify the PM when TAT is not going to bet met! JEL 9-9-14

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
QC Level: LEVEL 2
Work Order: 1410373
Project: #770619001; The Oaks
Client Contact: Peter Cusack
Date Received: 10/9/2014
Comments: SEND HARD COPY/ Always notify the PM when TAT is not going to bet met! JEL 9-9-14
Contact's Email: pcusack@langan.com

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410373-001A	B-1-2.5	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1410373-002A	B-1-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1410373-003A	B-1-8.5	Soil		1	Big Stainless Tube	☐	10/2/2014			☑	
1410373-004A	B-1-10.5	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
1410373-005A	B-1-16.5	Soil		1	Big Stainless Tube	☐	10/2/2014			☑	
1410373-006A	B-1-17.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo)			☐		5 days		☐	
1410373-007A	B-2-3.0	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1410373-008A	B-2-5.0	Soil	Multi-Range TPH(g,d,mo)	1	Plastic Baggie, Medium	☐	10/2/2014	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

Big Stainless Tube =
Plastic Baggie, Medium = Medium Plastic Baggie

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
QC Level: LEVEL 2
Work Order: 1410373
Project: #770619001; The Oaks
Client Contact: Peter Cusack
Date Received: 10/9/2014
Comments: SEND HARD COPY/ Always notify the PM when TAT is not going to bet met! JEL 9-9-14
Contact's Email: pcusack@langan.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410373-008A	B-2-5.0	Soil	SW6020 (LUFT)	1	Plastic Baggie, Medium	☐	10/2/2014	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1410373-009A	B-2-10.5	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
1410373-010A	B-2-15.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	10/2/2014	5 days		☐	
			Multi-Range TPH(g,d,mo)			☐		5 days		☐	
1410373-011A	B-2-20.5	Soil		1	Big Stainless Tube	☐	10/2/2014			☑	
1410373-012A	B-3-3.0	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	10/3/2014	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1410373-013A	B-3-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	☐	10/3/2014	5 days		☐	
			Multi-Range TPH(g,d,mo)			☐		5 days		☐	
1410373-014A	B-3-8.0	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	10/3/2014	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
1410373-015A	B-3-10.5	Soil		1	Big Stainless Tube	☐	10/3/2014			☑	
1410373-016A	B-3-15.5	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	☐	10/3/2014	5 days		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

Big Stainless Tube =
Plastic Baggie, Medium = Medium Plastic Baggie

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO

Project: #770619001; The Oaks

Comments: SEND HARD COPY/ Always notify the PM when TAT is not going to bet met! JEL 9-9-14

QC Level: LEVEL 2

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Work Order: 1410373

Date Received: 10/9/2014

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410373-016A	B-3-15.5	Soil	SW6020 (CAM 17)	1	Big Stainless Tube	☐	10/3/2014	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1410373-017A	B-3-20	Soil		1	Big Stainless Tube	☐	10/3/2014			☑	
1410373-018A	B-1-5@8'	Soil		1	Big Stainless Tube	☐	10/3/2014			☑	
1410373-019A	B-1-10@17'	Soil		1	Big Stainless Tube	☐	10/3/2014			☑	
1410373-020A	B-1-12@20.5'	Soil		1	Big Stainless Tube	☐	10/3/2014			☑	
1410373-021A	B-2-4@7.5'	Soil		1	Plastic Baggie, Medium	☐	10/3/2014			☑	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

Big Stainless Tube =
Plastic Baggie, Medium = Medium Plastic Baggie

1410373

Treadwell&Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

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☒ 555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415.955.9040/Fax: 415.955.9041
☐ 501 14th Street, Third Floor, Oakland CA 94612 Ph: 510.874.4500/Fax: 510.874.4507
☐ 777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: The Oaks
Job Number: 770619001
Project Manager\Contact: P Lusack
Samplers: M Catlin
Recorder (Signature Required):

Turnaround Time Standard

MP

				Matrix			No. Containers & Preservative					Analysis Requested														
Field Sample Identification No.	**Date**	**Time**	**Lab Sample No.**	Soil	Water	Other	HCL	H_2SO_4	HNO_3	Ice	Other	TPH g, d, mo	VOCs	SVOCs	Pesticides/PCBs	CAM 17 Metals	LUFT 5 Metals							Silica gel clean-up	Hold	**Remarks**
B-1-2.5	10/02/14			X							X	X			X	X										
B-1-5.5												X	X	X			X									
B-1-8.5																									X	
B-1-10.5												X				X										
B-1-16.5																										
B-1-17.5												X					X									
B-2-3.0												X			X		X									
B-2-5.0												X	X	X			X									
B-2-10.5												X				X										
B-2-15.5												X					X									
B-2-20.5																									X	
B-3-3.0	10/03/14											X			X	X										
B-3-5.5												X					X									
B-3-8.0												X			[illegible]	X										

Relinquished by: (Signature) Nikita Patel	Date 10/08/14	Time 1350	Received by: (Signature)	Date 10/8/14	Time 1350
Relinquished by: (Signature)	Date 10/8/14	Time 1645	Received by: (Signature)	Date 10/8/14	Time 1645
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): McCampbell
Laboratory Comments/Notes:

Method of Shipment ☑ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS
☐ Hand Carried ☐ Private Courier (Co. Name) ________

White Copy - Original   Yellow Copy - Laboratory   Pink Copy - Field

COC Number: 006225

ICE · 1.0
GOOD CONDITION ____ APPROPRIATE
HEAD SPACE ABSENT ____ CONTAINERS ____
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____
VOAS | O & G | METALS | OTHER

Treadwell&Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

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Site Name:
Job Number:
Project Manager\Contact:
Samplers:
Recorder (Signature Required):

Turnaround Time Standard

MP/.

				Matrix			No. Containers & Preservative					Analysis Requested														
Field Sample Identification No.	**Date**	**Time**	**Lab Sample No.**	Soil	Water	Other	HCL	H_2SO_4	HNO_3	Ice	Other	TPH g,d,mo	VOCs	SVOCs	Pesticides/PCBs	CAM 17 Metals	LUFT 5 Metals							Silica gel clean-up	**Hold**	**Remarks**
B-3-10.5	10/03/14			X							X														X	
B-3-15.5												X	X	X		X										
B-3-	↓			↓							↓														X	
20																										
*B-1-5@8'																									X	
*B-1-10@17'																									X	
*B-1-12@20.5'																									X	
*B-2-4@7.5'																									X	

Relinquished by: (Signature)	Date 10/8/14	Time 1350	Received by: (Signature)	Date 10/8/14	Time 1350
Relinquished by: (Signature)	Date 10/8/14	Time 1645	Received by: (Signature)	Date 10/8/14	Time 1645
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name):
Laboratory Comments/Notes:

Method of Shipment ☐ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS ☐ Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field COC Number: 005448

*EXTRA SAMPLES RECEIVED NOT ON COC placed ON Hold 10/9/14 a.v

Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
Date and Time Received: **10/9/2014 9:28:17 PM**
Project Name: **#770619001; The Oaks**
LogIn Reviewed by: Ana Venegas
WorkOrder №: **1410373** Matrix: Soil
Carrier: Benjamin Yslas (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Sample IDs noted by Client on COC?	Yes ☑	No ☐	
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐	
Sampler's name noted on COC?	Yes ☑	No ☐	

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		
Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1410373 A

Report Created for: Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Project Contact: Peter Cusack
Project P.O.:
Project Name: #770619001; The Oaks

Project Received: 10/09/2014

Analytical Report reviewed & approved for release on 10/24/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

ACCREDITED IN ACCORDANCE WITH nelac

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

Glossary of Terms & Qualifier Definitions

Client:	Treadwell & Rollo
Project:	#770619001; The Oaks
WorkOrder:	1410373

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifiers

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	CA Title 22
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6020
Date Prepared:	10/20/14	**Unit:**	mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-8.0	**1410373-014A**	**Soil/WET**	**10/03/2014**	**ICP-MS2**	**96731**

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.10	1	10/23/2014 14:11

Analyst(s): DVH

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	CA Title 22
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6010B
Date Prepared:	10/20/14	**Unit:**	mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	**1410373-001A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	**0.11**	0.050	1	10/23/2014 17:03

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5.5	**1410373-002A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	**0.22**	0.050	1	10/23/2014 17:06

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10.5	**1410373-004A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.050	1	10/23/2014 17:08

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-17.5	**1410373-006A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.050	1	10/23/2014 17:15

Analyst(s): DVH

(Cont.)

Analytical Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Project:	#770619001; The Oaks	**Extraction Method:**	CA Title 22
Date Received:	10/9/14 21:28	**Analytical Method:**	SW6010B
Date Prepared:	10/20/14	**Unit:**	mg/L

Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-3.0	**1410373-007A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	**0.057**	0.050	1	10/23/2014 17:18

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5.0	**1410373-008A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.050	1	10/24/2014 10:02

Analyst(s): AG

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10.5	**1410373-009A**	**Soil/WET**	**10/02/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.050	1	10/23/2014 17:20

Analyst(s): DVH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3.0	**1410373-012A**	**Soil/WET**	**10/03/2014**	**ICP-JY**	**96811**

Analytes	Result	RL	DF	Date Analyzed
Chromium	**0.064**	0.050	1	10/23/2014 17:22

Analyst(s): DVH

Quality Control Report

Client:	Treadwell & Rollo	**WorkOrder:**	1410373
Date Prepared:	10/20/14	**BatchID:**	96731
Date Analyzed:	10/23/14	**Extraction Method:**	CA Title 22
Instrument:	ICP-MS2	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/L
Project:	#770619001; The Oaks	**Sample ID:**	MB/LCS-96731 1410373-014AMS/MSD

QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	9.52	0.10	10	-	95	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	8.86	8.81	10	ND	89	88	75-125	0.566	20

QA/QC Officer

Quality Control Report

Client: Treadwell & Rollo
Date Prepared: 10/22/14
Date Analyzed: 10/23/14
Instrument: ICP-JY
Matrix: Soil
Project: #770619001; The Oaks

WorkOrder: 1410373
BatchID: 96811
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-96811

QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	0.992	0.050	1	-	99	75-125

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1410373 **A** **ClientCode: TWRF**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Peter Cusack
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
(415) 955-5244 FAX: (415) 955-9041

Email: pcusack@langan.com
cc/3rd Party:
PO:
ProjectNo: #770619001; The Oaks

Bill to:
Accounts Payable
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concursolut

Requested TAT: **5 days**
Date Received: **10/09/2014**
Date Add-On: **10/20/2014**
Date Printed: **10/21/2014**

					Requested Tests (See legend below)											
Lab ID	**Client ID**	**Matrix**	**Collection Date**	**Hold**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1410373-001	B-1-2.5	Soil	10/2/2014	☐	A											
1410373-002	B-1-5.5	Soil	10/2/2014	☐	A											
1410373-004	B-1-10.5	Soil	10/2/2014	☐	A											
1410373-006	B-1-17.5	Soil	10/2/2014	☐	A											
1410373-007	B-2-3.0	Soil	10/2/2014	☐	A											
1410373-008	B-2-5.0	Soil	10/2/2014	☐	A											
1410373-009	B-2-10.5	Soil	10/2/2014	☐	A											
1410373-012	B-3-3.0	Soil	10/3/2014	☐	A											
1410373-014	B-3-8.0	Soil	10/3/2014	☐	A											

Test Legend:

1	**STLCMETALMS_S**	**2**		**3**		**4**		**5**	
6		**7**		**8**		**9**		**10**	
11		**12**							

Prepared by: Ana Venegas

Add-On Prepared By: Maria Venegas

Comments: SEND HARD COPY/ Always notify the PM when TAT is not going to bet met! JEL 9-9-14. STLC Cr added 10/20/14 STAT.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

WORK ORDER SUMMARY

Client Name: TREADWELL & ROLLO
QC Level: LEVEL 2
Work Order: 1410373
Project: #770619001; The Oaks
Client Contact: Peter Cusack
Date Received: 10/9/2014
Comments: SEND HARD COPY/ Always notify the PM when TAT is not going to bet met! JEL 9-9-14. STLC Cr added 10/20/14 STAT.
Contact's Email: pcusack@langan.com
Date Add-On: 10/20/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1410373-001A	B-1-2.5	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/2/2014	5 days*		☐	
1410373-002A	B-1-5.5	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/2/2014	5 days*		☐	
1410373-004A	B-1-10.5	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/2/2014	5 days*		☐	
1410373-006A	B-1-17.5	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/2/2014	5 days*		☐	
1410373-007A	B-2-3.0	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/2/2014	5 days*		☐	
1410373-008A	B-2-5.0	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Plastic Baggie, Medium	10/2/2014	5 days*		☐	
1410373-009A	B-2-10.5	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/2/2014	5 days*		☐	
1410373-012A	B-3-3.0	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/3/2014	5 days*		☐	
1410373-014A	B-3-8.0	Soil	SW6020 (Metals) (STLC) <Chromium>	1	Big Stainless Tube	10/3/2014	5 days*		☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

Big Stainless Tube =
Plastic Baggie, Medium = Medium Plastic Baggie

1410373

Treadwell&Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

Page 1 of 2

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☐ 777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: The Oaks
Job Number: 770619001
Project Manager\Contact: R Cusack
Samplers: M Catlin
Recorder (Signature Required):

Turnaround Time: Standard

MP

				Matrix			No. Containers & Preservative					Analysis Requested												Silica gel clean-up	Hold	
Field Sample Identification No.	**Date**	**Time**	**Lab Sample No.**	Soil	Water	Other	HCL	H_2SO_4	HNO_3	Ice	Other	TPHg,d,mo	VOCs	SVOCs	Pesticides/PCBs	CAM 17 Metals	LUFT 5 Metals		STLC Cr							**Remarks**
B-1-2.5	10/02/14			X							X	X			X	X			X							
B-1-5.5												X	X	X			X		X							
B-1-8.5																									X	
B-1-10.5												X				X			X							
B-1-16.5																										
B-1-17.5												X					X		X							
B-2-3.0												X			X		X		X							
B-2-5.0												X	X	X			X		X							
B-2-10.5												X				X			X							
B-2-15.5												X					X									
B-2-20.5																									X	
B-3-3.0	10/03/14											X			X	X			X							
B-3-5.5												X					X									
B-3-8.0												X			X	X			X							

Relinquished by: (Signature) Marketa Patil	Date 10/08/14	Time 1350	Received by: (Signature)	Date 10/8/14	Time 1350
Relinquished by: (Signature)	Date 10/8/14	Time 1645	Received by: (Signature)	Date 10/8/14	Time 1645
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): McCampbell
Laboratory Comments/Notes:
added 10/20/14 STAT

Method of Shipment ☑ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS
☐ Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: 006225

ICE: 1.0
GOOD CONDITION ____ APPROPRIATE
HEAD SPACE ABSENT ____ CONTAINERS ____
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____
VOAS | O & G | METALS | OTHER

APPENDIX G:
ACOUSTICAL ASSESSMENT

Acoustical Assessment
for the proposed
Westport Project
in the City of Cupertino, California

Prepared by:

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714.939.1030

July 2019

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LIST OF ABBREVIATED TERMS

ADT	Average Daily Traffic
ANSI	American National Standards Institute
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibel
DNL	day-night average
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
HVAC	heating, ventilation, and air conditioning
Hz	hertz
L_{dn}	day-night average sound level
L_{eq}	Equivalent Sound Level
L_{max}	maximum A-weighted sound level
L_{min}	minimum A-weighted sound level
L_{dn}	day-night average sound level
L_{eq}	Equivalent Sound Level
mm	millimeter
mph	miles per hour

1 INTRODUCTION

The purpose of this Acoustical Assessment is to evaluate potential impacts associated with construction and operations of the proposed Westport Project (project), located in the City of Cupertino, California.

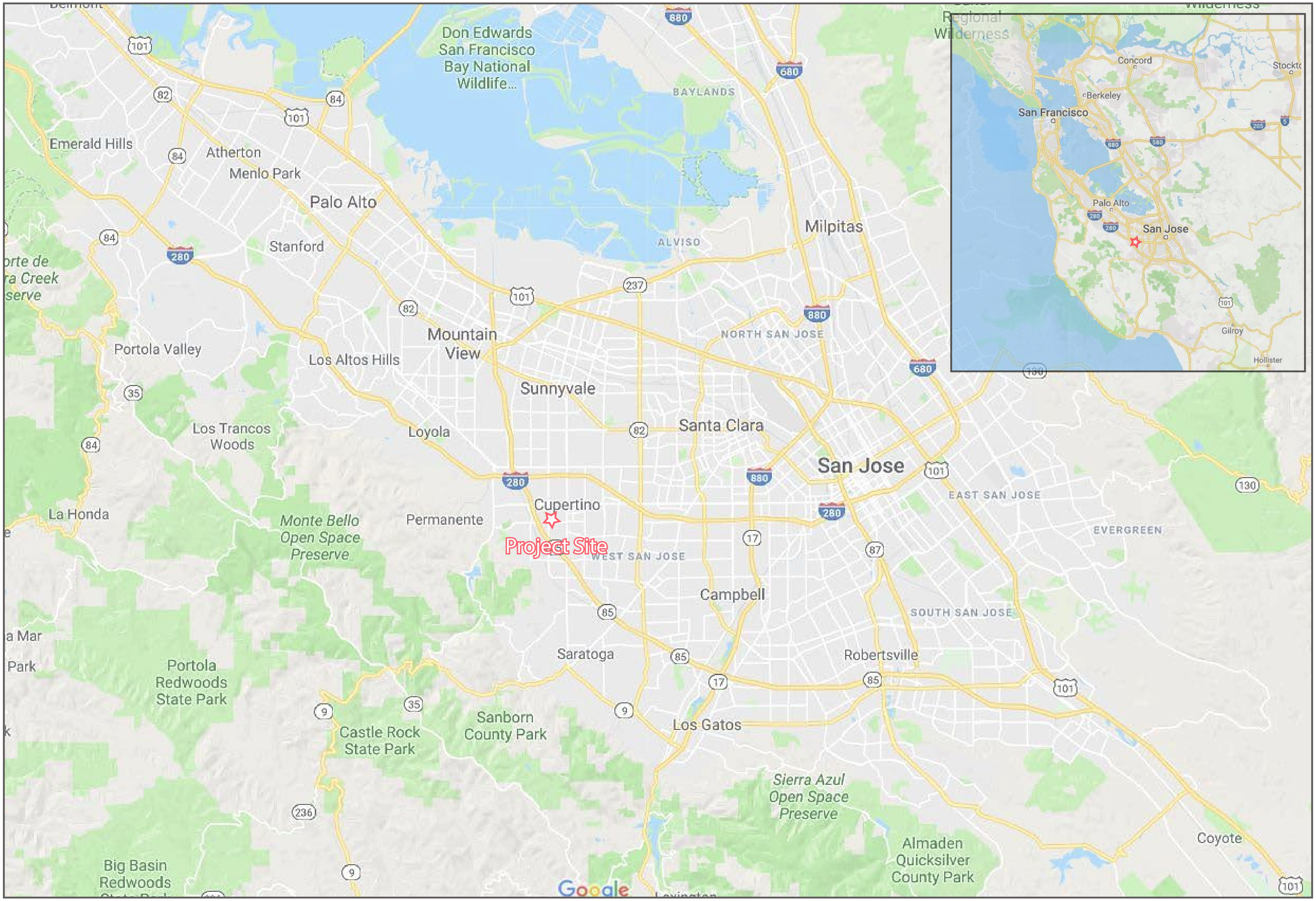
1.1 PROJECT LOCATION

The project site is located in the City of Cupertino, California within the Heart of the City Specific Plan area and is designated as a Priority Housing Site (HE-3) in the adopted Housing Element; refer to Exhibit 1. The project is located adjacent to SR-85 and Stevens Creek Boulevard; refer to Exhibit 2.

1.2 PROJECT DESCRIPTION

The proposed project is the redevelopment of 71,254 square-feet of shopping center on an 8.1-acre site to provide mixed-use urban village with 242 residential units and 20,000 square-feet of retail space. The project would have a six-story building with 115 residential units and 17,700 square-feet of ground-floor retail, a five-story building with 39 senior units and 2,300 ground-floor retail, 69 residential townhouses, 19 residential rowhouses. The project includes a one story- belowground garage with 232 parking spaces, 117 surface parking spaces, and 176 private garage units. The proposed project includes 20 separate buildings. The maximum building height would be 70 feet. The townhouses and rowhomes have attached garages, while the mixed-use buildings use the parking garage or surface parking.

In the Heart of the City Specific Plan the project site is designated as Oaks Gateway, a Mixed Use Planned Development (General Commercial) [P(CG)]. The CG designation allows professional, general, administrative, business offices, dance and music studios, child care centers, as well as other uses that do not involve the direct retailing of goods or services to the general public. However, the mixed use allows residential located behind the primary uses and above the ground level.



Source: Kimley-Horn and Associates, 2018

Figure 1: Regional Location Map

Westport Project

Not to scale

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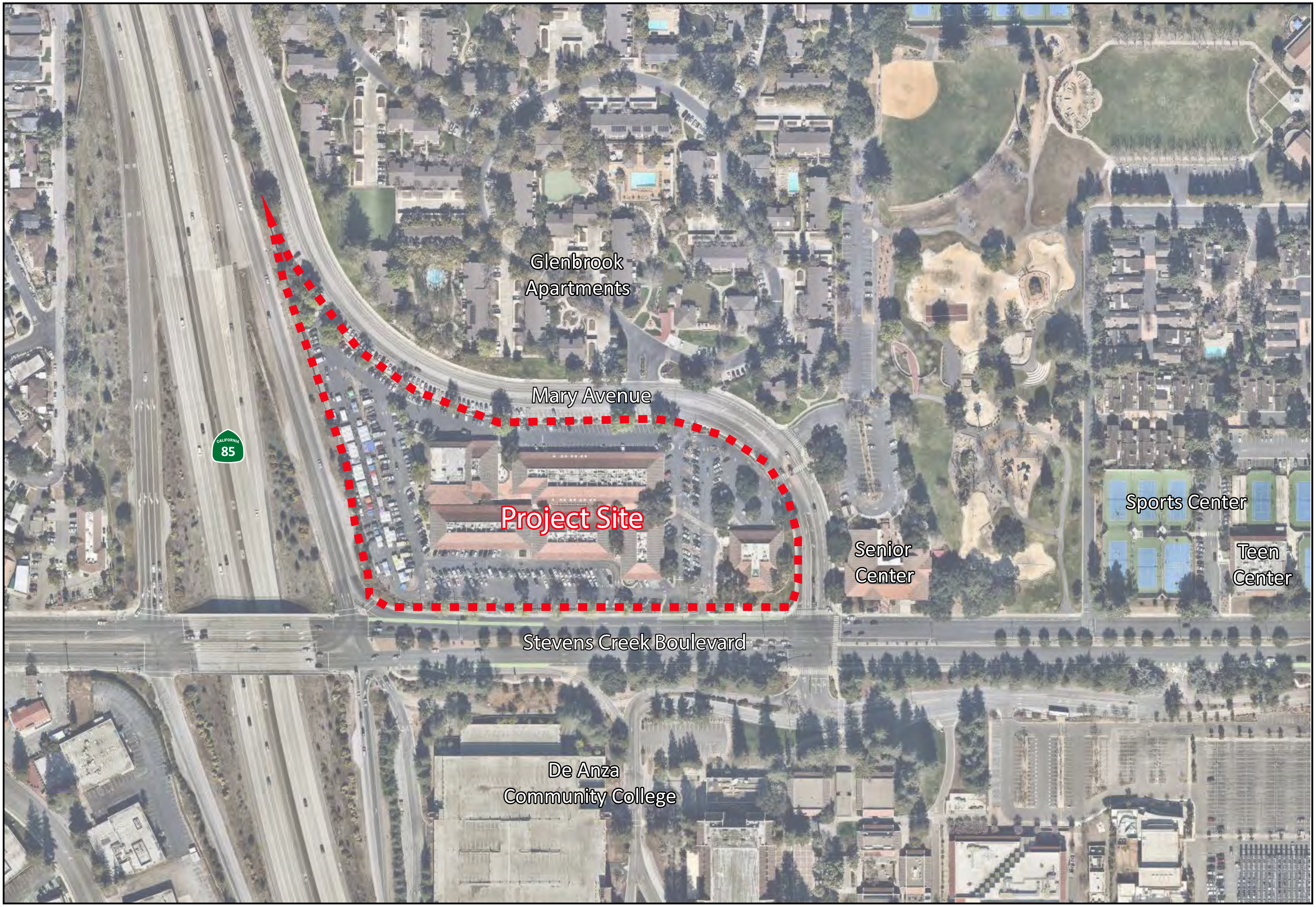

Source: Kimley-Horn and Associates, 2018

Exhibit 2: Site Vicinity
Westport Project

Not to scale

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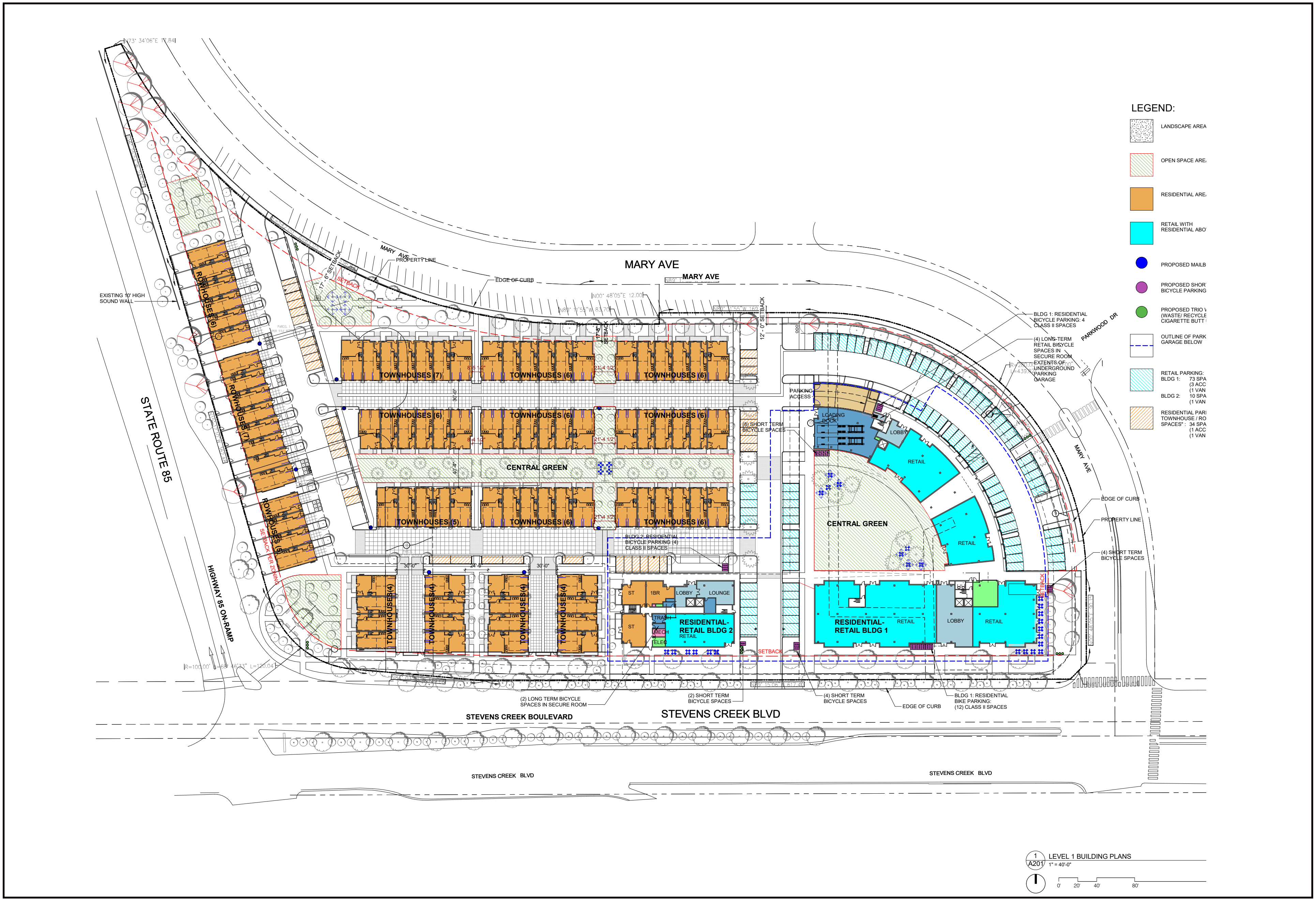

Source: C2K Architecture Inc., 2018

Exhibit 3: Site Plan

Westport Project

Not to scale

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2 FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. In acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receptor determine the sound level and characteristics of the noise perceived by the receptor. Acoustics deals primarily with the propagation and control of sound. A typical noise environment consists of a base of steady background noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness. Table 1, *Typical Noise Levels*, provides typical noise levels associated with common activities.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**– 70 –**	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	**– 60 –**	
		Large business office
Quiet urban daytime	**– 50 –**	Dishwasher in next room
Quiet urban nighttime	**– 40 –**	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	**– 0 –**	Lowest threshold of human hearing

dBA = A-weighted decibels; mph = miles per hour

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) is a measure of the average noise level averaged over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of an average level (L_{eq}) that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined in Table 2, *Definitions of Acoustical Terms*.

Table 2: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Type 1 sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA.[1] Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The decibel scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound and twice as loud as a 60 dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed

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[1] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.[2]

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[2] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the state of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

3.1 STATE OF CALIFORNIA

California Government Code

California Government Code Section 65302 (f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

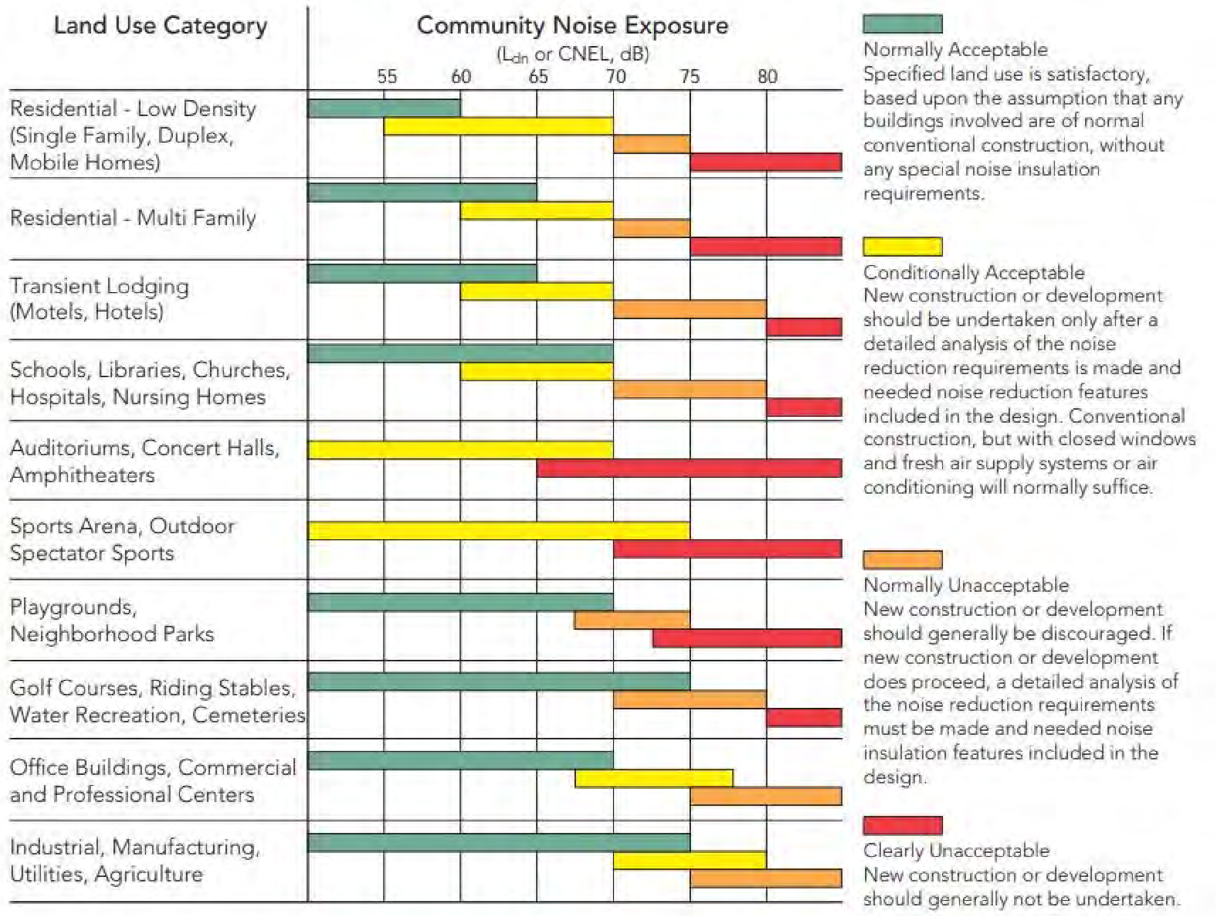
The state's noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for the purpose of interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.2 CITY OF CUPERTINO

City of Cupertino General Plan

The City of Cupertino General Plan- Community Vision 2015-2040 is a roadmap that encompasses the hopes, aspirations, values and dreams of the Cupertino community. The Health and Safety Element of the General Plan covers the State-mandated Noise Element. The City of Cupertino Municipal Code, Title 10, outlines the maximum noise levels on receiving properties based upon land use types (Figure 1, *Land Use Compatibility for Community Noise Environments*). Noise compatibility can be achieved by avoiding the location of conflicting land uses adjacent to one another, incorporating buffers and noise control techniques including setbacks, landscaping, building transitions, site design, and building construction techniques. Selection of the appropriate noise control technique would vary depending on the level of noise that needs to be reduced as well as the location and intended land use.

Exhibit 4: Land Use Compatibility for Community Noise Environments



🟩 Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

🟨 Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise reduction features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

🟧 Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

🟥 Clearly Unacceptable
New construction or development should generally not be undertaken.

Source: City of Cupertino General Plan. 2015.

The following lists applicable noise goals and targets that apply to the proposed project obtained from the General Plan:

Goal LU-13: **Ensure a cohesive, landscaped boulevard that supports all modes of transportation, links its distinct and active commercial and mixed-use sub-areas and notes, and create a high-quality, distinct community image and a vibrant heart for Cupertino.**

Policy 13-7: Streetscape and Connectivity. Create a walkable and bikeable boulevard with active uses and a distinct image for each subarea.

Strategy LU-13.7.5: Neighborhood Buffers. Consider buffers such as setbacks, landscaping and/or building transitions to buffer abutting single family residential areas from visual and noise impacts.

Goal LU-27: Preserve neighborhood character and enhance connectivity to nearby services to create complete neighborhoods

Policy LU-27.8 Protection. Protect residential neighborhoods from noise, traffic, light, glare, odors and visually intrusive effects from more intense development with landscape buffers, site and building design, setbacks and other appropriate measures.

Goal HS-8: Minimize noise impacts on the community and maintain a compatible noise environment for existing and future land uses.

Policy HS-8.1: Land Use Decision Evaluation. Use the Land Use Compatibility for Community Noise Environments chart, the Future Noise Contour Map (see Figure D-2 in Appendix D) and the City Municipal Code to evaluate land use decisions.

Policy HS-8.2: Building and Site Design. Minimize noise impacts through appropriate building and site design.

> Strategy HS-8.2.1: Commercial Delivery Areas. Locate delivery areas for new commercial and industrial developments away from existing or planned homes.
>
> Strategy HS-8.2.2: Noise Control Techniques. Require analysis and implementation of techniques to control the effects of noise from industrial equipment and processes for projects near low-intensity residential uses.
>
> Strategy HS-8.2.3: Sound Wall Requirements. Exercise discretion in requiring sound walls to be sure that all other measures of noise control have been explored and that the sound wall blends with the neighborhood. Sound walls should be designed and landscaped to fit into the environment.

Policy HS-8.3: Construction and Maintenance Activities. Regulate construction and maintenance activities. Establish and enforce reasonable allowable periods of the day, during weekdays, weekends and holidays for construction activities. Require construction contractors to use the best available technology to minimize excessive noise and vibration from construction equipment such as pile drivers, jack hammers, and vibratory rollers.

Policy HS-8.4: Freeway Design and Neighborhood Noise. Ensure that roads and development along Highway 85 and Interstate 280 are designed and improved in a way that minimizes neighborhood noise.

Policy HS-8.5: Neighborhoods. Review residents' needs for convenience and safety and prioritize them over the convenient movement of commute or through traffic where practical.

Policy HS-8.6: Traffic Calming Solutions to Street Noise. Evaluate solutions to discourage through traffic in neighborhoods through enhanced paving and modified street design.

> Strategy HS-8.6.1: Local Improvement. Modify street design to minimize noise impact to neighbors.

Policy HS-8.7: Reduction of Noise from Trucking Operations. Work to carry out noise mitigation measures to diminish noise along Foothill and Stevens Creek Boulevards from the quarry and cement plant trucking operations. These measures include regulation of truck speed, the volume of truck activity, and trucking activity hours to avoid late evening and early morning. Alternatives to truck transport, specifically rail, are strongly encouraged when feasible.

> Strategy HS-8.7.1: Restrictions in the County's Use Permit. Coordinate with the County to restrict the number of trucks, their speed and noise levels along Foothill and Stevens Creek Boulevards, to the extent allowed in the Use Permit. Ensure that restrictions are monitored and enforced by the County.
>
> Strategy HS-8.7.2: Road Improvements to Reduce Truck Impacts. Consider road improvements such as medians, landscaping, noise attenuating asphalt, and other methods to reduce quarry truck impacts.

City of Cupertino Municipal Code

The City of Cupertino Municipal Code Chapter 10.48: Community Noise Control discusses the powers and duties of the Noise Control Officer, exceptions to the noise ordinance, and allowable noise levels for daytime, landscaping, outdoor public events, and construction. Table 3, *Daytime and Nighttime Maximum Noise Levels*, shows the maximum noise levels according to the Municipal Code. Table 3 shows the maximum permissible noise level that may be generated by sources on a nonresidential land use is 55 dBA during nighttime hours and 65 dBA during daytime hours.

Table 3: Daytime and Nighttime Maximum Noise Levels

Land Use at Point of Origin	Maximum Noise Level at Complaint Site of Receiving Property	
	Nighttime	Daytime
Residential	50 dBA	60 dBA
Nonresidential	55 dBA	65 dBA

Source: City of Cupertino Municipal Code Ch. 10.48

Pursuant to Section 10.48.050, during the daytime period only, brief noise incidents exceeding established limits are permitted, providing that the sum of the noise duration in minutes plus the excess noise level does not exceed twenty in a 2-hour period. Table 4, *Maximum Permissible Noise Levels*, shows example combinations of allowable noise level exceedances.

Table 4: Maximum Permissible Noise Levels

Noise Increment Above Normal Standard	Noise Duration in 2-Hour Period
5 dBA	15 minutes
10 dBA	10 minutes
15 dBA	5 minutes
19 dBA	1 minute

Source: City of Cupertino Municipal Code Ch. 10.48

Interior Noise

Interior noise in multi-family dwelling should not produce a noise level exceeding 45 dBA five feet from any wall in an adjoining unit between 7:00 a.m. and 10:00 p.m. or exceeding 40 dBA between 10:00 p.m. and 7:00 a.m. (Ch. 10.48.054).

Landscape Maintenance Activities Noise

The City of Cupertino Municipal Code has Landscape Maintenance Activities (Ch. 10.48.051) which limits the hours of landscape maintenance activities from 8:00 a.m. to 8:00 p.m. on weekdays, and 9:00 a.m. to 6:00 p.m. on weekends and holidays, excluding public facilities which are allowed to begin at 7:00 a.m. During these hours, noise from the use of motorized equipment for landscape maintenance activities is allowed to exceed the maximum permissible noise limits of Section 10.48.040 of the Municipal Code, provided that the equipment is outfitted with appropriate mufflers and is operated over the minimal period necessary.

Grading, Construction, and Demolition Noise

The City of Cupertino has Grading, Construction and Demolition noise requirements (Ch. 10.48.053). Noise from these activities is allowed to exceed the maximum permissible noise limits (Table 4) provided that the equipment utilized is outfitted with high-quality mufflers and abatement devices and is in good condition. In addition, noise-producing construction activities must meet one of the following criteria:

- No individual device produces a noise level of more than 87 dBA as measured at a distance of 25 feet; or
- The operation of such equipment does not produce noise levels that exceed 80 dBA as measured at any nearby property.

Except for emergency work, construction activities including grading, street construction, demolition, or underground utility work are not permitted within 750 feet of a residential area on Saturdays, Sundays, and holidays, and during the nighttime period. Construction activities, other than street construction, are prohibited on holidays. In addition, construction activities, other than street construction, are prohibited during nighttime periods unless they meet the City's nighttime maximum permissible noise level standards.

The City's land use activity and site development regulations in Section 19.60.060 of the Municipal Code address noise standards for new commercial construction that adjoins a residential district. The construction of new buildings on properties adjoining a residential district must include the following noise attenuation features:

- Exterior walls must be designed to attenuate all noise emanating from interior retail space.
- Loading docks and doors must be located away from residential districts. Required fire doors are excluded.
- Air conditioning, exhaust fans, and other mechanical equipment must be acoustically isolated to comply with the noise ordinance.
- A minimum 8-foot-high masonry sound wall must be installed on or adjacent to the common property line, and
- An acoustical engineer must certify that the sound attenuation measures comply with the intent of the regulation and the City's community noise ordinance.

4 EXISTING CONDITIONS

4.1 NOISE MEASUREMENTS

To determine ambient noise levels in the project area, four 10-minute noise measurements were taken using a 3M SoundPro DL-1 Type I integrating sound level meter between 10:53 a.m. and 11:55 a.m. on May 1, 2018; refer to Appendix A for existing noise measurement data and Exhibit 4: Noise Measurement Locations. Noise Measurement one was taken to represent the ambient noise level north of the project site near the existing apartment complex; Noise Measurement two was taken to represent the ambient noise level east of the project site near the Senior Center; Noise Measurement three was taken to represent the ambient noise level south of the site along Stevens Creek Boulevard; and Noise Measurement four represents the existing ambient noise from the SR 85 west of the project site. The primary noise sources during all four measurements was traffic on Stevens Creek Boulevard, SR-85, and parking lot noises. Table 5, *Noise Measurements*, provides the ambient noise levels measured at these locations.

Table 5: Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Glenbrook Apartment Homes entrance on Mary Avenue	66.9	47.3	88.5	10:53 a.m.
2	Along Mary Avenue next to Senior Center	75.2	48.0	94.4	11:08 a.m.
3	Along Stevens Creek Boulevard, south of project site	77.9	53.7	90.2	11:26 a.m.
4	Parking lot adjacent to SR-85	75.4	60.0	81.2	11:41 a.m.

Source: Noise measurements taken by Kimley-Horn on May 1, 2018.

4.2 SENSITIVE RECEPTORS

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. Sensitive receptors near the project site include: residences approximately 90 feet north of the site, 630 feet east of the site, a City of Cupertino Senior Center approximately 80 feet east of the site, and De Anza Community College approximately 140 feet south of the site, across Stevens Creek Boulevard. These distances are from the proposed project site to the sensitive receptor property line. Additionally, the proposed on-site residences would be a sensitive receptor.

4.3 EXISTING NOISE LEVELS

Mobile Sources

Existing roadway noise levels were calculated for the roadway segments in the project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and existing traffic volumes from the project traffic impact analysis (Kimley-Horn 2018). The noise prediction model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (also referred to as energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data indicates that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels.[3] The average daily noise levels along roadway segments in proximity to the project site are included in Table 6, *Existing Traffic Noise Levels*.

Table 6: Existing Traffic Noise Levels

Roadway Segment	ADT	dBA CNEL at 100 feet from Centerline of Roadway
Stevens Creek Boulevard from SR-85 to Stelling Road	32,220	72.3
Mary Avenue from Parkwood Drive to Stevens Creek Boulevard	7,010	65.3

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.
Data source: Based on traffic data within the Transportation Analysis Memorandum, prepared by Kimley-Horn, 2018. Refer to Appendix B for traffic noise modeling assumptions and results.
Source: Kimley-Horn and Associates, 2018.

As depicted in Table 6, the existing traffic-generated noise level on project-vicinity roadways currently is 72.3 dBA CNEL 100 feet from the centerline of Stevens Creek Boulevard and 65.3 dBA CNEL 100 feet from the centerline of Mary Avenue. As previously described, CNEL is 24-hour average noise level with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Stationary Sources

The primary sources of stationary noise in the project vicinity are those associated with the operations of adjacent residential uses to the north and east, and public uses south and east of the site. The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

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[3] California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.

Source: Kimley-Horn and Associates, 2018

Exhibit 5: Noise Measurement Locations

Westport Project

Not to scale

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Expect More. Experience Better.

5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA THRESHOLDS

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive ground borne vibration or ground borne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; and
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

5.2 METHODOLOGY

Construction

Construction noise estimates are based upon noise levels from the FHWA *Roadway Construction Noise Model* (FHWA-HEP-05-054, January 2006) as well as the distance to nearby sensitive receptors. Reference noise levels from the FHWA are used to estimate noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Construction noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Operations

Operational noise issues evaluated in this section include vehicle traffic noise and land use compatibility of potential future uses with the City's Compatibility Guidelines as well as stationary source noise (e.g., mechanical equipment, on-site trucks/loading docks, etc.). Traffic noise modeling was completed using the FHWA RD-77-108 model. Traffic noise level significance is determined by comparing the increase in noise levels (traffic contribution only) to increments recognized by Caltrans as representing a perceptible increase in noise levels. Additionally, it is widely accepted methodology by both FTA and the Federal Interagency Committee on Noise (FICON) that thresholds should be more stringent for environments that are already noise impacted. Consequently, for noise environments where the ambient noise level is 65 dBA DNL or less, the significance threshold applied is an increase of 5 dBA or more, which Caltrans recognizes as a readily perceptible increase. In noise environments where the ambient noise level exceeds 65 dBA DNL, the significance threshold applied is an increase of 3 dBA or more, which Caltrans recognizes as a barely perceptible increase.

Operational noise is evaluated based on the standards within the City's Noise ordinance (Ch. 10.48: Community Noise Control). A significant noise impact would occur if a project results in an exceedance of the noise level standards, or the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater.

The proposed project would not introduce new operational vibration sources (e.g., impact equipment, streetcar and rail operations, and blasting activities), and therefore, there would be no operational vibration impacts, and operational vibration is not discussed further.

6 POTENTIAL IMPACTS AND MITIGATION

Threshold 6.1 Would the project expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold 6.3 Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Threshold 6.4 Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

There are two types of short-term noise impacts associated with construction, noise generated from equipment and increase in traffic flow on local streets. Construction for the proposed project is expected to last approximately 16 months.

Equipment Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery.

Grading and excavation phases of project construction tend to be the shortest in duration and create the highest construction noise levels due to the operation of heavy equipment required to complete these activities. It should be noted that only a limited amount of equipment can operate near a given location at a particular time. Equipment typically used during this stage includes heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, and scrapers. Operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute. According to the applicant, no pile-driving will be used during construction for the proposed project.

Per Section 10.48.053 of the City's Municipal Code, the City allows heavy construction activities that exceeds the noise standards to occur during the daytime hours, provided that the equipment has high-quality noise muffler and abatement devices installed and in good condition. However, the activity must not produce a noise level more than 87 dBA at a distance of 25 feet or exceed 80 dBA for nearby properties. Construction within 750 feet of a residential area is not allowed over the weekends, holidays, and during the nighttime.

Sensitive receptors near the project site include: residences approximately 90 feet north of the site, 630 feet east of the site, a City of Cupertino Senior Center approximately 80 feet east of the site, and De Anza Community College approximately 140 feet south of the site, across Stevens Creek Boulevard. These distances are from the proposed project site to the sensitive receptor property line. Additionally, the proposed on-site residences would be a sensitive receptor. These sensitive uses may be exposed to elevated noise levels during project construction. As noted above, the City's Municipal Code construction noise standards require that no piece of construction equipment exceed a noise level of 87 dBA at a distance of 25 feet or that construction noise exceeds 80 dBA at any nearby property. The proposed project would adhere to the City's Municipal Code construction noise standards. Table 7, *Project Construction Average Noise Levels,* highlights the estimated exterior construction noise level for the sensitive receptors surrounding the proposed project site.

Table 7: Project Construction Average Noise Levels

Construction Phase/Activity	Receptor Location			Estimated Exterior Construction Noise Level	
	Land Use	Direction	Distance[1]	(dBA L_{eq})[2]	dBA L_{max}
Demolition	Residential	North	175	73.9	78.7
		East	160	74.6	79.5
	Institutional	South	280	69.8	74.6
Site Preparation	Residential	North	175	74.2	74.1
		East	160	75.0	74.9
	Institutional	South	280	70.1	70.0
Grading	Residential	North	175	75.2	74.1
		East	160	75.9	74.9
	Institutional	South	280	73.0	74.4
Paving	Residential	North	175	74.2	74.1
		East	160	74.2	74.1
	Institutional	South	280	70.6	70.0
Building	Residential	North	175	74.9	74.1
		East	160	75.7	74.9
	Institutional	South	280	71.0	70.0

Notes:
1. Distance is from the property line of the nearest receptor to the main construction zone of the proposed project.
2. Derived from the FHWA *Roadway Construction Noise Model (FHWA-HEP-05-054),* Jan 2006. Refer to Appendix A for noise modeling assumptions and results.

Based on the discussion above, noise levels at the nearest residence during construction activities would be expected to reach the highest levels during grading with exterior noise levels of 74.6 dBA L_{eq} for the Senior Center 160 feet east. The highest dBA L_{max} would be the Senior Center with exterior noise levels of 79.5 dBA. At these distances, composite construction noise would be reduced to the conservatively estimated levels discussed in Table 7 (due to distance attenuation alone).

Construction activities would be limited to daytime hours when people would be out of their houses, would conform to the time-of-day restrictions of the City's Municipal Code, and would not exceed 80 dBA at the nearest residence. Mitigation Measure N-1 is required to ensure that construction noise levels do not exceed the City's standards and that time-of-day restrictions are adhered to. With Implementation of Mitigation Measure N-1, construction noise impacts to nearby receptors would be less than significant.

Construction Traffic Noise

Construction noise may be generated by large trucks moving materials to and from the project site. Large trucks would be necessary to deliver building materials as well as remove dump materials and cut soil. Excavation and cut and fill would be required, resulting in grading of approximately 69,000 net cubic yards to be exported from the site. Based on the California Emissions Estimator Model (CalEEMod) default assumptions for this project, as analyzed in the Project Air Quality Assessment (Kimley Horn 2018), the project would generate the highest number of daily trips during the building construction phase. The model estimates that the project would generate up to 239 worker trips and 52 vendor trips per day. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and vehicle mix do not also change) would result in a noise level increase of 3 dBA. As shown in the existing traffic conditions discussion, Stevens Creek Boulevard between SR 85 and Stelling Road has an average daily trip volume of 32,220 vehicles. Therefore, 291 project construction trips (239 worker trips plus 52 vendor trips) would not double the existing traffic volume of 32,220 vehicles per day. Construction related traffic noise would not be noticeable and would not create a significant noise impact.

The State of California establishes noise limits for vehicles licensed to operate on public roads using a pass-by test procedure. Pass-by noise refers to the noise level produced by an individual vehicle as it travels past a fixed location. The pass-by procedure measures the total noise emissions of a moving vehicle with a microphone. When the vehicle reaches the microphone, the vehicle is at full throttle acceleration at an engine speed calculated for its displacement.

For heavy trucks, the State pass by standard is consistent with the federal limit of 80 dB. The State pass by standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. According to the FHWA, dump trucks typically generate noise levels of 77 dBA and flatbed trucks typically generate noise levels of 74 dBA, at a distance of 50 feet from the truck (FHWA, *Roadway Construction Noise Model,* 2006).

Additionally, the City's General Plan Environmental Impact Report (EIR) identified that the General Plan policies and Municipal Code regulations would reduce construction noise impacts to less than significant levels. The proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and would not result in any impacts beyond those previously identified.

Operations

Traffic Noise

Implementation of the project would generate increased traffic volumes along study roadway segments. According to the transportation analysis memorandum, the project would result in a net total of 1,988 average daily weekday trips, which would result in noise increases on project area roadways. In general, traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable (Caltrans, 2009). Generally, traffic volumes on project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant.

Traffic noise levels for roadways primarily affected by the proposed project were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the project, based on traffic volumes obtained from the project Traffic Analysis Memorandum (Kimley-Horn 2018). According to Table 8, *Existing and Future With Project Traffic Noise Levels,* the project would not have a significant impact on traffic noise levels. The increase from existing noise levels from Stevens Creek Boulevard near the project site is less than 1 dBA increase. The increase from existing noise levels from Mary Avenue near the project site is slightly greater than 1 dBA increase, however it is less than 3 dBA and therefore barely perceptible to people.

The project would not result in a doubling of traffic on project area roadways. Moreover, project traffic would traverse and disperse over project area roadways, where existing ambient noise levels already exist.

Table 8: Existing and Future With Project Traffic Noise Levels

Roadway Segment	Existing Noise Level (100 feet from Roadway Centerline) (dBA CNEL)	Future With Project Noise Level (100 feet from Roadway Centerline) (dBA CNEL)	Change	Significant Impacts
Stevens Creek Boulevard from SR-85 to Stelling Road	72.3	73.0	0.7	No
Mary Avenue from Parkwood Drive to Stevens Creek Boulevard	65.3	66.4	1.1	No

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.
Noise levels are calculated 100 feet from centerline of the roadway.
Data source: Based on traffic data within the Transportation Analysis Memorandum, prepared by Kimley-Horn, 2018. Refer to Appendix B of the Acoustical Assessment for traffic noise modeling assumptions and results.
Source: Kimley-Horn and Associates, 2018

The City's General Plan EIR identified significant and unavoidable impacts associated with traffic noise despite the implementation of applicable General Plan policies. The proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and would not result in any impacts beyond those previously identified. As describe above, the proposed project would not contribute to the significant and unavoidable impact identified in the General Plan EIR.

Stationary Noise Sources

Implementation of the proposed project would create new sources of noise in the project vicinity. The major noise sources associated with the project that would potentially impact existing and future nearby residences include the following:

- Mechanical equipment (i.e., trash compactors, air conditioners, etc.);
- Traffic Noise
- Slow moving delivery/supply trucks on the project site, approaching and leaving the loading areas;
- Activities at the loading areas (i.e., maneuvering and idling trucks, banging and clanging of equipment);
- Parking areas (i.e., car door slamming, car radios, engine start-up, and car pass-by); and
- Landscape maintenance activities.

Residential Areas

Noise that is typical of high-density residential areas includes group conversations, pet noise, vehicle noise (see discussion below) and general maintenance activities. Noise from residential stationary sources would primarily occur during the "daytime" activity hours of 7:00 a.m. to 10:00 p.m. Furthermore, the residences would be required to comply with the noise standards set forth in the City's General Plan and Municipal Code.

Mechanical Equipment

Regarding mechanical equipment, the proposed project would generate stationary-source noise associated with heating, ventilation, and air conditioning (HVAC) units. Such HVAC units typically generate noise levels of approximately 55 dBA at a reference distance of 100 feet from the operating units during maximum heating or air conditioning operations. As stated above, the nearest existing sensitive receptor's property lines are located more than 80 feet from the commercial and mixed-use areas of the project site. However, the mechanical equipment associated with the proposed residences would be similar to the existing uses and would also be buffered by a proposed road and existing and proposed setbacks and would be approximately 100 feet away from the closest residences. Given that existing and project-related sensitive receptors would be located beyond 100 feet from on-site HVAC units, noise generated by HVAC units would not result in a significant impact.

Loading Area Noise

The proposed project includes a mixed-use development with commercial and retail uses that would necessitate occasional truck delivery operations. The proposed project is not anticipated to require a significant number of truck deliveries. The majority of deliveries for the commercial uses would consist of vendor deliveries in vans and would be somewhat infrequent and irregular. Occasional loading noise associated with residential moving trucks would also occur in a loading area adjacent to the proposed commercial buildings. The noise associated with one large truck delivery and smaller cargo vans would not result in a significant number of truck trips to significantly increase noise within the project area. It should be noted that truck deliveries/operations (including trash pickup trucks) currently occur at the project site. Therefore, truck deliveries associated with the proposed project site would not be an intrusive or significant noise source compared to existing conditions. Impacts resulting from truck delivery activities would be less than significant.

Parking Areas

Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. Also, noise would primarily remain on the project site and would be intermittent (during peak-events). However, the instantaneous maximum sound levels generated by a car door slamming, engine starting up and car pass-bys may be an annoyance to adjacent noise-sensitive receptors. Parking lot noise can also be considered a "stationary" noise source.

The project proposes a one-story subterranean parking structure with 232 parking spaces located in the eastern portion of the site. Noise levels from parking lot activities typically range from approximately 60 to 63 dBA at a distance of 50 feet. However, parking noise is anticipated to be lower as the majority of parking would occur in a structure that would be predominantly enclosed.

Approximately 117 surface parking would be distributed throughout the project site. Noise associated with the surface parking areas would be consistent with the existing parking lot noise that currently occurs on the site. Additionally, surface parking lot noise would be partially masked by background noise from traffic along SR-85 and Stevens Creek Boulevard. Therefore, parking lot noise would not result in substantially greater noise levels than currently exist in the vicinity. Noise impacts would less than significant in this regard.

On-Site Mobile Noise

The California Supreme Court in a December 2015 opinion (*California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal. 4th 369 [No. S 213478]) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, the evaluation of the significance of project impacts under CEQA in the following discussion is provided to ensure compliance with City and State Building Code noise standards.

The project proposes a mixed-use development that includes 242 multi-family residential dwelling units on the project site. The future residents of the proposed on-site multi-family residential units could be exposed to elevated noise levels from traffic noise along SR-85 and Stevens Creek Boulevard. Table 8 shows that noise levels from Stevens Creek Boulevard could reach 73.0 dBA at the project site and Figure D-2 in the Noise Element (Future Noise Contours) shows the western portion of the project site located within the 70 dBA CNEL contour while the eastern portion is in the 65 dBA CNEL contour. Therefore, noise levels on the project site would potentially exceed the City's 65 dBA Normally Acceptable exterior standard for multi-family residential uses (per Figure HS-8 of the City's General Plan) and the 45 dBA interior standard per the State Building Code.

Therefore, the project would be required to comply with Mitigation Measure N-2, which require a detailed acoustical study demonstrating that all residential units would meet the City's 65 dBA exterior noise standard for all patios, balconies, and common outdoor living areas through any necessary noise reduction features (barriers, berms, enclosures, etc.). Further, Mitigation Measure N-2 also requires all residential units to be designed to ensure that interior noise levels in habitable rooms from exterior sources (including vehicles on adjacent roadways) shall not exceed 45 dBA, in compliance with Title 24 of the California Code of Regulations. Compliance with Mitigation Measure N-2 would result in a less than significant impact.

Landscape Maintenance Activities

Development and operation of the proposed project would introduce new landscaping requiring periodic maintenance. Noise generated by a gasoline-powered lawnmower is estimated to be approximately 70 dBA at a distance of five feet. However, maintenance activities would operate during daytime hours for brief periods of time as allowed by the City Municipal Code and would not permanently increase ambient noise levels in the project vicinity. Therefore, with adherence to the City's Municipal Code, impacts associated with landscape maintenance would be less than significant.

Overall, implementation of MM N-1 through MM N-2 and adherence to Municipal Code requirements, noise impacts associated with traffic, mechanical equipment, deliveries, loading/unloading activities, and parking lot noise would be reduced to a less than significant level. Additionally, the City's General Plan EIR determined that stationary source noise impacts would be less than significant. The proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and would not result in any impacts beyond those previously identified.

Mitigation Measures

MM N-1: Construction Noise

Prior to Grading Permit issuance or the start of demolition activities, the Applicant shall demonstrate, to the satisfaction of the City of Cupertino Public Works Director and/or Community Development Director, that the project complies with the following:

- Construction activities shall be limited to day time hours (Municipal Code Section 10.48.010 defines daytime hours as the period from 7:00 a.m. to 8:00 p.m. on weekdays), per Section 10.48.053 of the City's Municipal Code.
- At least 90 days prior to the start of construction activities, all offsite businesses and residents within 300 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification should include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, which includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City.
- During the entire active construction period, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
- During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible.
- Haul routes shall be selected to avoid the greatest amount of sensitive use areas.
- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.
- During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise

level, or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.

MM N-2: Noise Attenuation

Prior to issuance of building permits a detailed acoustical study based on architectural plans shall be prepared by a qualified acoustical consultant and submitted to the Community Development Department to demonstrate that all residential units would meet the City's 65 dBA exterior noise standard for all outdoor use areas. In addition, the acoustical study shall demonstrate that interior noise levels at all residential units at the project site would meet the Title 24 CalGreen (Title 24, Part 11 of the California Code of Regulations) 45 dBA standard. This mitigation measure complies with the applicable sections of Chapter 10.48.054 of the City's Municipal Code and the California Building Code (Title 24 of the California Code of Regulations). The necessary noise reduction may be achieved by implementing noise control measures at the receiver locations. Where closed windows are required to achieve the interior standards, project plans and specifications shall include ventilation as required by the California Building Code. The final grading and building plans shall incorporate any required noise barriers or sound-rated windows. The property owner/developer shall install these barriers and enclosures.

Level of Significance: Less than significant impact with mitigation.

Threshold 6.2 Would the project expose persons to or generate excessive ground borne vibration or ground borne noise levels?

Construction

Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, depending on the building category of the nearest buildings adjacent to the potential pile driving area, the potential construction vibration damage criteria vary. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 inch per second (in/sec) peak particle velocity (PPV) is considered safe and would not result in any construction vibration damage. The FTA architectural damage criterion for continuous vibrations for non-engineered timber and masonry buildings (i.e., 0.20 inch/second) appears to be conservative. The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. According to the applicant, the proposed project does not expect to use pile drivers as construction equipment. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Since there are no established vibration standards in the City of Cupertino, this evaluation uses the Federal Transit Administration (2006) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for normal buildings. This measurement is also the level at which vibrations may begin to annoy people inside buildings (Caltrans 2013).

Table 9, *Typical Equipment Vibration Levels,* identifies vibration levels feet for typical construction equipment. Based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction would range from 0.003 to 0.210 inch/second PPV at 25 feet from the source of activity. It is also acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure.

Table 9: Typical Construction Equipment Vibration Levels

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)	Peak Particle Velocity at 82 Feet (inches per second)
Large Bulldozer	0.089	0.015
Caisson Drilling	0.089	0.015
Loaded Trucks	0.076	0.013
Rock Breaker	0.059	0.010
Jackhammer	0.035	0.006
Vibratory Roller	0.210	0.035
Small Bulldozer/Tractor	0.003	0.001

Notes:
1. Calculated using the following formula:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

where: PPV (equip) = the peak particle velocity in inch per second of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in inch per second from Table 12-2 of the FTA Transit Noise and Vibration Impact Assessment Guidelines
D = the distance from the equipment to the receiver

The nearest sensitive receptors would be approximately 82 feet to the north. Based on typical vibration levels, ground vibration generated by heavy-duty equipment could reach levels of 0.035 inches per second peak particle velocity at 82 feet. The use of construction equipment would not result in a groundborne vibration velocity level above the established threshold of 0.2 inches per second PPV. As a result, impacts associated with excessive groundborne vibration during construction would be less than significant.

Operational

The proposed project would not generate groundborne vibration that could be felt at surrounding uses. The project would not involve railroads or substantial heavy truck operations, with the exception of delivery vehicles to the project site once facilities are operational. As a result, impacts from vibration associated with project operation would be less than significant.

The City's General Plan EIR determined that construction and operational vibration impacts would be less than significant. The proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and would not result in any impacts beyond those previously identified.

Level of Significance: Less than significant impact.

Threshold 6.5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Threshold 6.6 For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The nearest public airport is the Norman Y. Mineta San Jose International Airport located approximately 6.7 miles east of the site. Other airports near the City of Cupertino are Moffett Federal Airfield, approximately 5.5 miles north of the site, and Palo Alto Airport approximately 9.6 miles north of the site. As such, the project is not located within an airport land use plan nor is it located within two miles of a public airport. Therefore, no impacts would occur. Additionally, there are no private airstrips or airports near the City of Cupertino and the project site. Therefore, no impacts would occur.

Additionally, the City's General Plan EIR notes that no portion of Cupertino is within an airport land use plan for any of the airports located near the City boundary. No portion of Cupertino is within 2 miles of public or public use airport, nor is any portion of the city within an airport's influence area or 55 dBA CNEL noise contour. There are no private airstrips located within Cupertino. The General Plan EIR found that there would be no impact related to excessive noise levels from airports. As described above, the proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and would not result in any impacts beyond those previously identified.

Level of Significance: No impact.

CUMULATIVE NOISE IMPACTS

The project's construction activities would result in a substantial temporary increase in ambient noise levels. However, as discussed in Threshold 6.4, these temporary noise levels would not exceed 80 dBA for the surrounding residential units. There would be periodic, temporary, noise impacts that would cease upon completion of construction activities. The project would contribute to and construction noise impacts should other development proximate to the project site occur concurrent with the proposed project.

However, based on the noise analysis above, impacts from the project's noise would be less than significant with mitigation. Based on the fact that noise dissipates as it travels away from its source, noise impacts from on-site activities and other stationary sources would be limited to the project site and vicinity. Thus, cumulative operational noise impacts from related projects, in conjunction with project-specific noise impacts, would not be cumulatively significant.

The City's General Plan EIR identified significant and unavoidable impacts associated with cumulative traffic noise despite the implementation of applicable General Plan policies. The proposed project would be consistent with the City's General Plan and the analysis in the General Plan EIR and would not result in any impacts beyond those previously identified. As describe above, the proposed project would not contribute to the significant and unavoidable cumulative impact identified in the General Plan EIR.

7 REFERENCES

1. C2K Architecture, *Architectural Site Plan,* April 2018
2. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.
3. City of Cupertino, General Plan Amendment, Housing Element Update, and Associated Rezoning Draft EIR, June 18, 2014.
4. City of Cupertino, *Cupertino General Plan Community Vision 2015-2040*, 2015.
5. City of Cupertino, *Cupertino Municipal Code,* March 2018.
6. City of Cupertino, *Heart of the City Specific Plan,* December 2014.
7. Cyril Harris, *Handbook of Noise Control, Second Edition*, 1979.
8. Cyril M. Harris, *Noise Control in Buildings – A Practical Guide for Architects and Engineers*, 1994.
9. Federal Highway Administration (FHWA), *Roadway Construction Noise Model (RCNM) User's Guide,* 2006 FHWA-HEP-05-054.
10. Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment,* 2006. FTA-VA-90-1003-06.
11. Kimley-Horn and Associates. *Transportation Analysis Memorandum.* 2018.
12. U.S. Environmental Protection Agency, *Protective Noise Levels (EPA 550/9-79-100)*, November 1979.

Appendix A

Existing Ambient Noise Measurements

Noise Measurement Field Data

Project:	Westport	**Job Number:**	_097817002
Site No.:	1	**Date:**	5/1/2018
Analyst:	Noemi Wyss	**Time:**	10:53 AM
Location:	Glenbrook Apartment Homes entrance		
Noise Sources:	Cars on Mary Street entering apartment complex, pedestrians, landscapers		
Comments:	**run ended 11:03 am**		

Results (dBA):

Leq:	66.9	**Lmin:**	47.3	**Lmax:**	88.5	**Peak:**	107.8

Equipment	
Sound Level Meter:	SoundPro DL
Calibrator:	QC-10
Response Time:	Fast
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	70
Wind (mph):	>5
Sky:	Clear
Bar. Pressure:	29.84
Humidity:	42%

Photo:

Noise Measurement Field Data

Project:	Westport	**Job Number:**	_097817002
Site No.:	2	**Date:**	5/1/2018
Analyst:	Noemi Wyss	**Time:**	11:08 AM
Location:	Next to Senior Center		
Noise Sources:	Stevens Creek Boulevard, pedestrians, Mary Avenue		
Comments:	**run ended 11:19 am**		

Results (dBA):

Leq:	75.2	**Lmin:**	48	**Lmax:**	94.4	**Peak:**	110.1

Equipment	
Sound Level Meter:	SoundPro DL
Calibrator:	QC-10
Response Time:	Fast
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	70
Wind (mph):	>5
Sky:	Clear
Bar. Pressure:	29.84
Humidity:	42%

Photo:

Noise Measurement Field Data

Project:	Westport	**Job Number:**	_097817002
Site No.:	3	**Date:**	5/1/2018
Analyst:	Noemi Wyss	**Time:**	11:26 AM
Location:	Along Stevens Creek Blvd, south of project site		
Noise Sources:	Stevens Creek Blvd		
Comments:	**Run until 11:37 am**		

Results (dBA):

Leq:	77.9	**Lmin:**	53.7	**Lmax:**	90.2	**Peak:**	105.1

Equipment	
Sound Level Meter:	SoundPro DL
Calibrator:	QC-10
Response Time:	Fast
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	70
Wind (mph):	>5
Sky:	Clear
Bar. Pressure:	29.84
Humidity:	42%

Photo:

Noise Measurement Field Data

Project:	Westport	**Job Number:**	_097817002
Site No.:	4	**Date:**	5/1/2018
Analyst:	Noemi Wyss	**Time:**	11:41 AM
Location:	Parking lot adjacent to 85 freeway		
Noise Sources:	SR 85, helicopter, car alarm, parking lot, birds, truck idling		
Comments:	**Run ended 11:54 am**		

Results (dBA):

Leq:	75.4	**Lmin:**	60	**Lmax:**	81.2	**Peak:**	93.9

Equipment	
Sound Level Meter:	SoundPro DL
Calibrator:	QC-10
Response Time:	Fast
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	70
Wind (mph):	>5
Sky:	Clear
Bar. Pressure:	29.84
Humidity:	42%

Photo:

Appendix B

Noise Model Output Files

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/11/2018
Case Description: Demolition

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
North	Residential	67	57	57

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw	No	20		89.6	130	0
Excavator	No	40		80.7	130	0
Dozer	No	40		81.7	130	0
Flat Bed Truck	No	40		74.3	130	0

Results

		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		81.3	74.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		72.4	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck		66	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	81.3	76.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South	Residential	67	57	57

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw	No	20		89.6	170	0
Excavator	No	40		80.7	170	0
Dozer	No	40		81.7	170	0
Flat Bed Truck	No	40		74.3	170	0

Results

		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		79	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		70.1	66.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		71	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck		63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	79	74.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
East	Residential	67	57	57

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw	No	20		89.6	130	0
Excavator	No	40		80.7	130	0
Dozer	No	40		81.7	130	0
Flat Bed Truck	No	40		74.3	130	0

Results

		Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		81.3	74.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		72.4	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flat Bed Truck		66	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	81.3	76.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/11/2018
Case Descripti Demolition

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
North	Residential	67	57	57

			Equipment			
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	130	0
Dozer	No	40		81.7	130	0
Backhoe	No	40		77.6	130	0
Backhoe	No	40		77.6	130	0
All Other Equipment > 5 H	No	50	85		130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 H	76.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	76.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South	Residential	67	57	57

			Equipment			
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	170	0
Dozer	No	40		81.7	170	0
Backhoe	No	40		77.6	170	0
Backhoe	No	40		77.6	170	0
All Other Equipment > 5 H	No	50	85		170	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	71	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	71	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 H	74.4	71.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.4	74.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
East	Residential	67	57	57

			Equipment			
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	130	0
Dozer	No	40		81.7	130	0
Backhoe	No	40		77.6	130	0
Backhoe	No	40		77.6	130	0
All Other Equipment > 5 H	No	50	85		130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Dozer	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 H	76.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	76.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/11/2018
Case Descriptic Grading

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
North	Residential	67	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		130	0
Grader	No	40	85		130	0
Backhoe	No	40		77.6	130	0
Excavator	No	40		80.7	130	0
Excavator	No	40		80.7	130	0
Front End Loader	No	40		79.1	130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	76.7	72.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	76.7	72.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	72.4	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	72.4	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.8	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South	Residential	67	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		170	0
Grader	No	40	85		170	0
Backhoe	No	40		77.6	170	0
Excavator	No	40		80.7	170	0
Excavator	No	40		80.7	170	0
Front End Loader	No	40		79.1	170	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	74.4	70.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	74.4	70.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	70.1	66.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	70.1	66.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	68.5	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.4	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
East	Residential	67	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		130	0
Grader	No	40	85		130	0
Backhoe	No	40		77.6	130	0
Excavator	No	40		80.7	130	0
Excavator	No	40		80.7	130	0
Front End Loader	No	40		79.1	130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	76.7	72.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	76.7	72.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	72.4	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	72.4	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.8	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/11/2018
Case Descriptio Paving

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
North	Residential	67	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	130	0
Roller	No	20		80	130	0
Dozer	No	40		81.7	130	0
Front End Loader	No	40		79.1	130	0
Backhoe	No	40		77.6	130	0
All Other Equipment > 5 HP	No	50	85		130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	68.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.7	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.8	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	76.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South	Residential	67	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	170	0
Roller	No	20		80	170	0
Dozer	No	40		81.7	170	0
Front End Loader	No	40		79.1	170	0
Backhoe	No	40		77.6	170	0
All Other Equipment > 5 HP	No	50	85		170	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	66.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	69.4	62.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	71	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	68.5	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	66.9	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	74.4	71.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.4	74.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
East	Residential	67	57	57

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	130	0
Roller	No	20		80	130	0
Dozer	No	40		81.7	130	0
Front End Loader	No	40		79.1	130	0
Backhoe	No	40		77.6	130	0
All Other Equipment > 5 HP	No	50	85		130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	68.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.7	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.8	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	76.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/11/2018
Case Descripti Building

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
North	Residential	67	57	57

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	130	0
Crane	No	16		80.6	130	0
All Other Equipment > 5 H	No	50	85		130	0
Generator	No	50		80.6	130	0
Tractor	No	40	84		130	0
Front End Loader	No	40		79.1	130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	66	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	72.3	64.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 H	76.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	72.3	69.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	75.7	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.8	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	77.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South	Residential	67	57	57

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	170	0
Crane	No	16		80.6	170	0
All Other Equipment > 5 H	No	50	85		170	0
Generator	No	50		80.6	170	0
Tractor	No	40	84		170	0
Front End Loader	No	40		79.1	170	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	63.6	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	69.9	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 H	74.4	71.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	70	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	73.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	68.5	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.4	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
East	Residential	67	57	57

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Flat Bed Truck	No	40		74.3	130	0
Crane	No	16		80.6	130	0
All Other Equipment > 5 H	No	50	85		130	0
Generator	No	50		80.6	130	0
Tractor	No	40	84		130	0

Front End Loader	No	40		79.1	130	0

			Results											
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Flat Bed Truck	66	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	72.3	64.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 H	76.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	72.3	69.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	75.7	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.8	66.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.7	77.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name:	Westport
Project Number:	_097817001
Scenario:	Existing
Ldn/CNEL:	CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		**Distance from Centerline of Roadway**				
				Median	**ADT**	**Speed**	**Alpha**	**Medium**	**Heavy**	**CNEL at**	**Distance to Contour**			
#	**Roadway**	**Segment**	**Lanes**	**Width**	**Volume**	**(mph)**	**Factor**	**Trucks**	**Trucks**	**100 Feet**	**70 CNEL**	**65 CNEL**	**60 CNEL**	**55 CNEL**
1	Stevens Creek Boulevard	SR 85 to Stelling Road	6	17	32,220	35	0	4.6%	12.3%	72.3	170	536	1,696	5,362
2	Mary Avenue	Parkwood Drive to Stevens Creek Boulevard	2	10	7,010	35	0	4.6%	12.3%	65.3	-	108	343	1,083

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name:	Westport
Project Number:	_097817001
Scenario:	Horizon Year
Ldn/CNEL:	CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	**Roadway**	**Segment**	**Lanes**	**Width**	**Volume**	**(mph)**	**Factor**	**Trucks**	**Trucks**	**100 Feet**	**70 CNEL**	**65 CNEL**	**60 CNEL**	**55 CNEL**
1	Stevens Creek Boulevard	SR 85 to Stelling Road	6	17	35,844	35	0	4.6%	12.3%	72.8	189	596	1,886	5,965
2	Mary Avenue	Parkwood Drive to Stevens Creek Boulevard	2	10	7,799	35	0	4.6%	12.3%	65.8	38	121	381	1,205

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name:	Westport
Project Number:	_097817001
Scenario:	Horizon Year Plus Project
Ldn/CNEL:	CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	**Roadway**	**Segment**	**Lanes**	**Width**	**Volume**	**(mph)**	**Factor**	**Trucks**	**Trucks**	**100 Feet**	**70 CNEL**	**65 CNEL**	**60 CNEL**	**55 CNEL**
1	Stevens Creek Boulevard	SR 85 to Stelling Road	6	17	37,628	35	0	4.6%	12.3%	73.0	198	626	1,980	6,262
2	Mary Avenue	Parkwood Street to Stevens Creek Boulevard	2	10	8,884	35	0	4.6%	12.3%	66.4	43	137	434	1,373

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

APPENDIX H:
TRANSPORTATION ASSESSMENT

MEMORANDUM

From: Frederik Venter, P.E. and Anthony Nuti, Kimley-Horn and Associates

To: **Mark Tersini, KT Urban**

Date: November 27, 2018

Re: **Westport Cupertino – Transportation Analysis**

The purpose of this memorandum is to present traffic analysis findings for the proposed redevelopment of the Oaks Shopping Center, referred to as the "Westport Cupertino" Project. Trip generation, Distribution, and Assignment for the project are presented below as well as a level of service analysis for the intersection of Mary Avenue and Stevens Creek Boulevard.

1. Introduction

The existing site is 71,254 square feet of shopping center use (The Oaks), which includes specialty restaurants, retailers, and other commercial space.

The proposed project would demolish the existing buildings and construct a mixed-use urban village with 203 multifamily residential units (88 low-rise and 115 mid-rise), 39 senior residential units, and 20,000 square feet of general retail. The proposed site provides a total of 525 parking spaces (293 at-grade spaces and 232 below-grade parking spaces) and 40 spaces for bike parking. **Figure 1** shows the project vicinity and the surrounding street network. **Figure 2** shows the proposed site plan.

The proposed project land uses are consistent with the City of Cupertino General Plan Buildout.

2. Analysis Methodology

The Santa Clara Valley Transportation Authority (VTA) Traffic Impact Analysis Guidelines, dated October 2014, and the City of Cupertino guidelines and criteria were utilized in this analysis to determine project requirements and potential impacts. Intersection delay and level of service (LOS) calculations were performed using Highway Capacity Manual (HCM) 2000 methodology in Synchro Version 9, which is consistent with TRAFFIX software. Synchro was used instead of TRAFFIX because it provides improved signal timing evaluation at the intersection of Mary Avenue and Stevens Creek Boulevard. Vehicle miles traveled (VMT) was calculated using CalEEMod. The City of Cupertino 2040 General Plan Amendment Draft EIR states that at signalized intersections, a LOS D is acceptable for both the AM and PM peak hour.

3. Existing Conditions

The existing site is 71,254 square feet of shopping center use (The Oaks), which includes specialty restaurants, retailers, and other commercial space. Existing trips distribute to the east and west on Stevens Creek Boulevard, and onto SR-85. A few trips also distribute into the adjacent neighborhoods.

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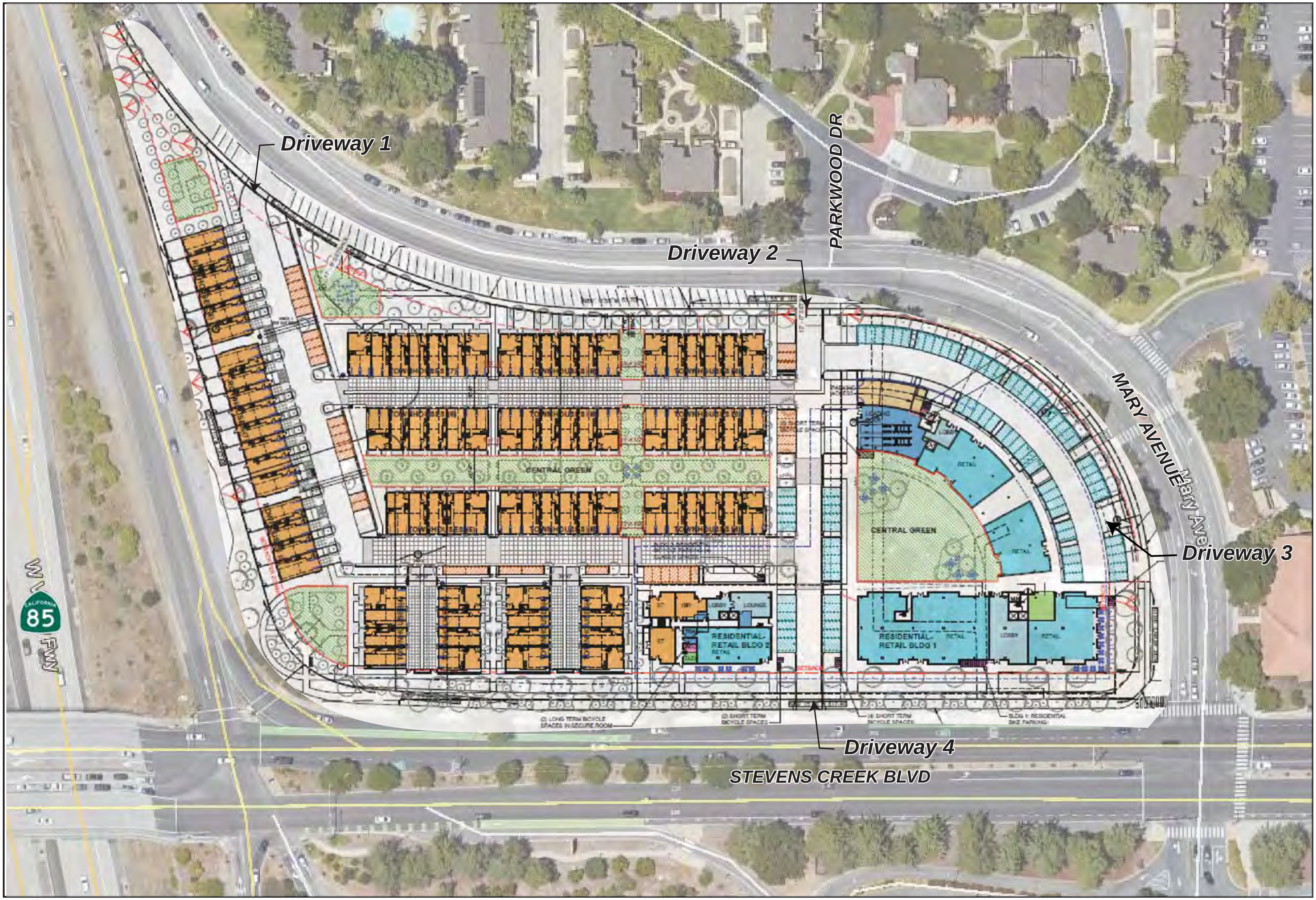
N
NOT TO SCALE

Westport
Figure 1
Project Vicinity Map



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Westport
Figure 2
PROPOSED PROJECT SITE

Surrounding the site is Mary Avenue to the north and east, Stevens Creek Boulevard to the south, and SR-85 to the west. Along Mary Avenue and Stevens Creek Boulevard there are Class II bike lanes. West of Driveway 4, the westbound Class II bike lane transitions across the outside lane that becomes a right turn only lane onto northbound SR-85.

VTA bus stops are located near the project site, within one-half mile, at the following locations:

- East of the intersection of Mary Avenue and Stevens Creek Boulevard (approximately 550 feet from the project site)
- North Stelling Rd and Stevens Creek Boulevard (approximately 1,500 feet from the project site)
- De Anza College, a major transit station (approximately 1,100 feet from the project site)
- N. Stelling Road (approximately 1,760 feet from the project site)
- South Stelling Road (approximately 1,950 feet from the project site)

The presence of several bus lines within proximity to the site, render the site a transit-rich location. Major land uses near the site are De Anza College to the south, Garden Gate Elementary School to the north, and Cupertino Memorial Park to the east. The site is otherwise surrounded by residential uses.

To the north of the project site along Mary Avenue, an informal Park-and-Ride facility exists for private shuttles. Vehicles park on both sides of the street during the day and shuttles transport passengers to major employment centers all over the Bay Area.

Based on the existing count data, the heaviest movement at the intersection of Mary Avenue and Stevens Creek Boulevard occurs in the eastbound direction in the PM peak hour. The eastbound AM peak hour volume is only 69% of the PM peak hour volume, and thus, the PM peak hour volume is most critical.

In the westbound direction, the AM and PM peak hour volumes are approximately the same (the AM is 94% of the PM peak hour volume). The westbound PM peak hour volume is only 59% of the eastbound PM peak hour volume. The total entering PM peak hour volumes are higher than the AM volumes at the intersection by 25%. Thus, the PM peak hour is critical for analysis.

4. Trip Generation

To determine the change in the number of daily, AM peak hour, and PM peak hour trips with construction of the proposed Project, trip generation for both existing (trip credits) and proposed conditions was calculated. The *Institute of Transportation Engineers (ITE) Trip Generation Manual*, 10th Edition, was used to develop trip generation estimates.

The existing shopping center has been approximately 85% occupied over the last 2 years. At 85% occupancy, the existing shopping center generates approximately 2,287 daily trips, 57 AM peak hour trips (36 IN / 21 OUT), and 230 PM peak hour trips (110 IN / 120 OUT). It should be noted that if full occupancy was assumed for the existing shopping center, the trips credited would have been even higher. This is a conservative estimate since ITE is based on gross lease area, which typically includes unoccupied units between 5% and 15%.

The proposed project is anticipated to generate approximately 2,174 gross daily trips, 108 gross AM peak hour trips (35 IN / 73 OUT), and 186 gross PM peak hour trips (104 IN / 82 OUT).

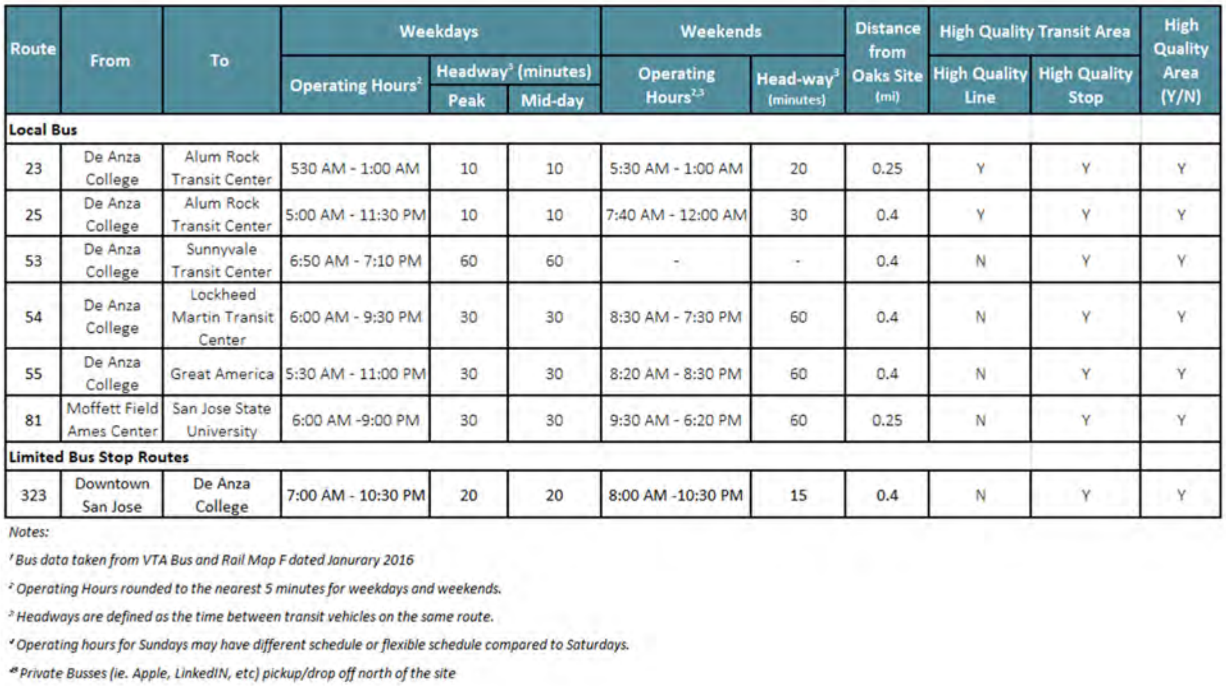
Trip Credits

Internal trip capture was then applied using the *National Cooperative Highway Research Program Report 684* (NCHRP 684), dated 2011. This methodology estimates the number of trips that have both the origin and destination within the proposed development. These internal trips are then subtracted from the total gross trips. After applying internal capture to the proposed project, reductions of 9% daily trips, 2% AM (3% IN / 1 % OUT), and 15% PM (13% IN / 17% OUT) were applied to gross trips.

VTA defines a major bus stop as a stop where six or more buses per hour stop during the peak period and is also referred to as a high-quality transit area. A major bus stop is located at De Anza College approximately 1900 feet from the project site. The residents of the proposed project are expected to use the crosswalk at Mary Avenue and Stevens Creek Boulevard to access this major stop. According to VTA TIA Guidelines, a 2% trip reduction can be used for housing within 2000 feet (0.38 miles) of a major bus stop. Applying the 2% trip reduction results in a reduction of -28 daily trips, -2 AM peak hour trips (-1 IN / -1 OUT), and -2 PM peak hour trips (-1 IN / -1 OUT). This trip reduction was only taken for residential trips.

Table 1 shows the current bus routes located in the study area.

Table 1 - Bus Routes Near Westport[1]



Route	From	To	Weekdays			Weekends		Distance from Oaks Site (mi)	High Quality Transit Area		High Quality Area (Y/N)
			Operating Hours[2]	Headway[3] (minutes)		Operating Hours[2,3]	Head-way[3] (minutes)		High Quality Line	High Quality Stop	
				Peak	Mid-day						
Local Bus											
23	De Anza College	Alum Rock Transit Center	530 AM - 1:00 AM	10	10	5:30 AM - 1:00 AM	20	0.25	Y	Y	Y
25	De Anza College	Alum Rock Transit Center	5:00 AM - 11:30 PM	10	10	7:40 AM - 12:00 AM	30	0.4	Y	Y	Y
53	De Anza College	Sunnyvale Transit Center	6:50 AM - 7:10 PM	60	60	-	-	0.4	N	Y	Y
54	De Anza College	Lockheed Martin Transit Center	6:00 AM - 9:30 PM	30	30	8:30 AM - 7:30 PM	60	0.4	N	Y	Y
55	De Anza College	Great America	5:30 AM - 11:00 PM	30	30	8:20 AM - 8:30 PM	60	0.4	N	Y	Y
81	Moffett Field Ames Center	San Jose State University	6:00 AM -9:00 PM	30	30	9:30 AM - 6:20 PM	60	0.25	N	Y	Y
Limited Bus Stop Routes											
323	Downtown San Jose	De Anza College	7:00 AM - 10:30 PM	20	20	8:00 AM -10:30 PM	15	0.4	N	Y	Y

Notes:

[1] Bus data taken from VTA Bus and Rail Map F dated Janurary 2016

[2] Operating Hours rounded to the nearest 5 minutes for weekdays and weekends.

[3] Headways are defined as the time between transit vehicles on the same route.

[4] Operating hours for Sundays may have different schedule or flexible schedule compared to Saturdays.

[5] Private Busses (ie. Apple, LinkedIN, etc) pickup/drop off north of the site

Pass-by trip credits for the shopping center were applied only to the PM peak hour based on average rates from Appendix E of the *ITE Trip Generation Handbook*, 3rd Edition. A pass-by trip is a trip that already exists on the network that will now visit the project site. Since the project is not producing these trips, pass-by trips are removed from the gross trip generation. This reduction was calculated to be -26 PM Peak hour trips (-12 IN / -14 OUT).

Therefore, the net new project trips are anticipated to be -275 daily trips, +47 AM peak hour trips (-3 IN / +50 OUT), and -22 PM peak hour trips (+4 IN / -26 OUT) after applying existing shopping center trip credits, as well as internal capture, VTA reductions, and pass-by reductions.

Per VTA TIA Guidelines, as adopted by the City of Cupertino, a complete TIA for Congestion Management Plan (CMP) purposes is required for any project in Santa Clara County that is expected to generate 100 or more net new weekday trips during any peak hour. The proposed Project is anticipated to generate fewer trips than the 100 peak hour trips required by VTA (36 AM peak and -109 PM peak), therefore a comprehensive TIA is not required, based on VTA guidelines.

Table 2 below summarizes the trip generation calculations.

Table 2 - Project Trip Generation

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR				PM PEAK HOUR			
				Daily Trips	Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Multifamily Housing (Low Rise)	220	-	Dwelling Unit(s)	7.32	0.46	23%	/	77%	0.56	63%	/	37%
Multifamily Housing (Mid-Rise)	221	-	Dwelling Unit(s)	5.44	0.36	26%	/	74%	0.44	61%	/	39%
Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35%	/	65%	0.26	55%	/	45%
Shopping Center	820	-	1,000 Sq Ft GLA	37.75	0.94	62%	/	38%	3.81	48%	/	52%
Existing Conditions												
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42	/	25	271	130	/	141
Shopping Center (85% Occupancy)[1]	820	60.566	1,000 Sq Ft GLA	2287	57	36	/	21	230	110	/	120
Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(78)	0	0	/	0	(78)	(37)	/	(41)
TOAL EXISTING TRIP CREDIT				**2209**	**57**	**36**	/	**21**	**152**	**73**	/	**79**
Proposed Conditions												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	646	40	9	/	31	49	31	/	18
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	626	41	11	/	30	51	31	/	20
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	146	8	3	/	5	10	6	/	4
Shopping Center	820	20.000	1,000 Sq Ft GLA	756	19	12	/	7	76	36	/	40
Gross Trips Generated before Internal Capture				2,174	108	35	/	73	186	104	/	82
Internal Capture Trips												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(44)	(1)	0	/	(1)	(6)	(4)	/	(2)
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	(42)	0	0	/	0	(7)	(5)	/	(2)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(10)	0	0	/	0	(1)	(1)	/	0
Shopping Center	820	20.000	1,000 Sq Ft GLA	(90)	(1)	(1)	/	0	(14)	(4)	/	(10)
Internal Capture Reduction				(186)	(2)	(1)	/	(1)	(28)	(14)	/	(14)
Trip Reductions due to Internal Capture[6]				9%	2%	3%	/	1%	15%	13%	/	17%
Additional Project Trip Reductions												
VTA Major Bus Stop (Daily, AM, PM = 2%) [2]				(28)	(2)	(1)	/	(1)	(2)	(1)	/	(1)
Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(26)	0	0		0	(26)	(12)	/	(14)
Project Trips				**1,934**	**104**	**33**	/	**71**	**130**	**77**	/	**53**
Existing Trip Credit				**(2209)**	**(57)**	**(36)**	/	**(21)**	**(152)**	**(73)**	/	**(79)**
Total Project Trips				**1934**	**104**	**33**	/	**71**	**130**	**77**	/	**53**
Net New Project Trips				**(275)**	**47**	**(3)**	/	**50**	**(22)**	**4**	/	**(26)**

Notes:
1. Assume current retail is 85% occupied
2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook.
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

5. Trip Distribution and Assignment

Due to the nature of the proposed redevelopment of the project site into a mixed-use urban village, trip assignment was split into two groups: retail and residential trips. Separate trip distribution and assignments were calculated for the retail and residential land use types. Distribution assumptions for residential and retail trips are discussed below. The volumes indicated at the driveways represent the actual driveway volume that would be observed and include the gross volumes minus the internal capture and minus the VTA bus stop trip credits. The driveway volumes do not include the existing land use credits or pass-by trip reductions, which are incorporated in the analysis for the Mary Avenue and Stevens Creek Boulevard intersection only.

Residential Trips

Residential project trips were distributed among project Driveways 1, 2, and 4. Residential trips are not anticipated to use the project Driveway 3, which will be used by retail only. Trips were distributed throughout the roadway network with approximately 8% (AM and PM Peak) of trips to/from the north on Mary Avenue and approximately 68% (AM and PM Peak) of trips to/from the west on Stevens Creek Boulevard and approximately 24% (AM and PM Peak) of trips to/from the east on Stevens Creek Boulevard.

The distribution for residential trips are illustrated in **Figure 3. Figure 4** shows the project trip assignment for AM and PM peak hour periods at the project driveways for residential trips. The volumes shown account for internal capture and VTA reductions only.

Retail Trips

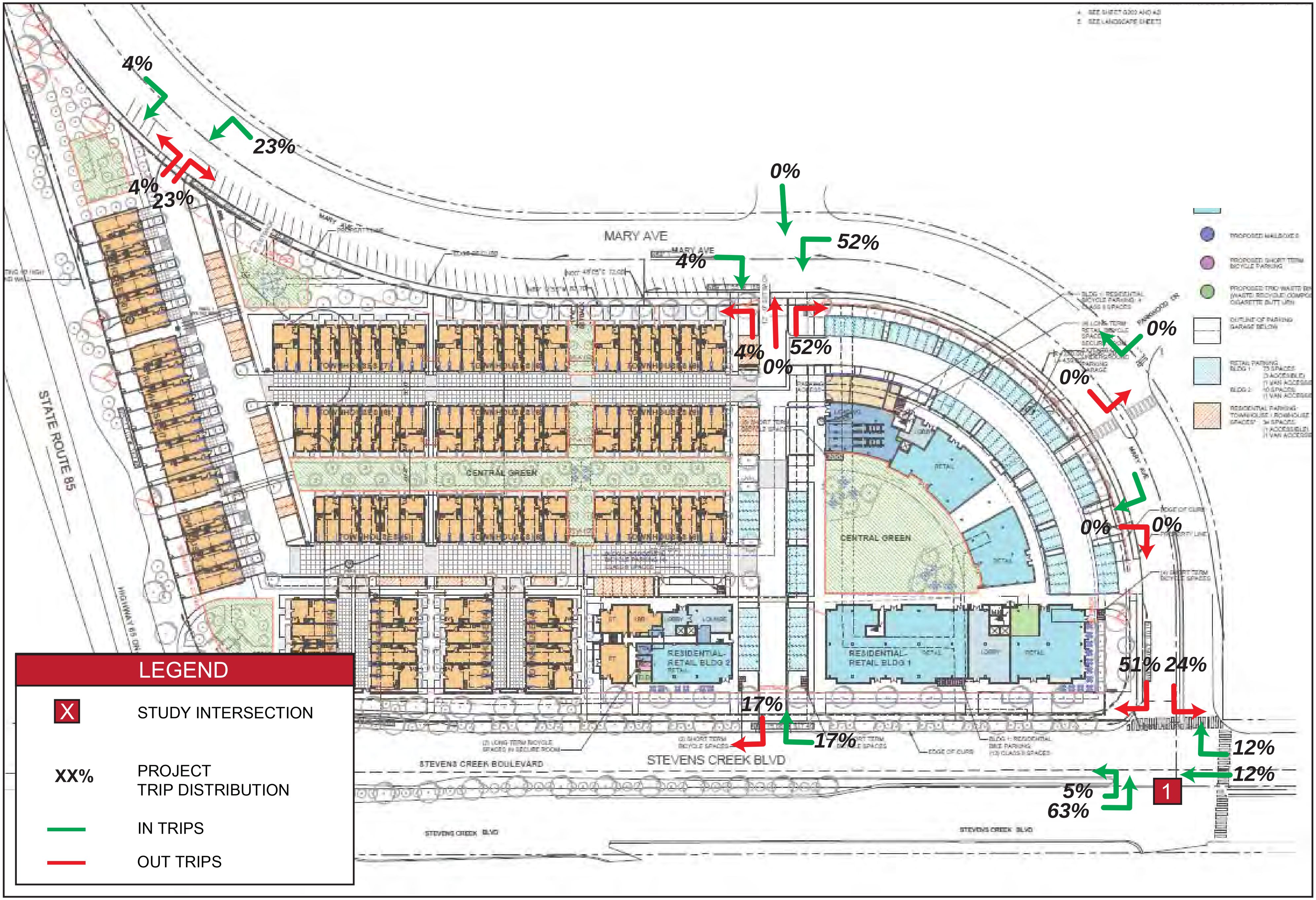
Retail project trips were distributed among project Driveways 2, 3, and 4. Retail trips are not expected to use project Driveway 1, because there is no retail in this section of proposed site. Trips were distributed throughout the roadway network with approximately 35% (AM and PM Peak) of trips to/from the north on Mary Avenue and approximately 30% (AM and PM Peak) of trips to/from the west on Stevens Creek Boulevard and approximately 30% (AM and PM Peak) of trips to/from the east on Stevens Creek Boulevard. Approximately 5% (AM and PM Peak) of the trips are anticipated to use Parkwood Drive (just north of the site). No trips were distributed at the driveway entrance to the senior center and park since retail visitors are expected to walk to the stores using the crosswalk with a flashing beacon on Mary Avenue.

The trips distributed along Mary Avenue are expected to already be on the roadway and are not new trips for the Project, since the existing site is used for retail purposes.

The distribution estimates for retail trips are illustrated in **Figure 5**. **Figure 6** shows the project trip assignment for AM and PM peak hour periods at the project driveway for retail trips. The volumes shown account for internal capture only.

The trip distribution is based on existing travel patterns at the intersection of Mary Avenue and Stevens Creek Boulevard.

Project driveway volumes for both residential and retail land uses, as well as through volumes on Mary Avenue, are relatively low. Therefore, LOS analyses at the Project driveways are not warranted.



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N
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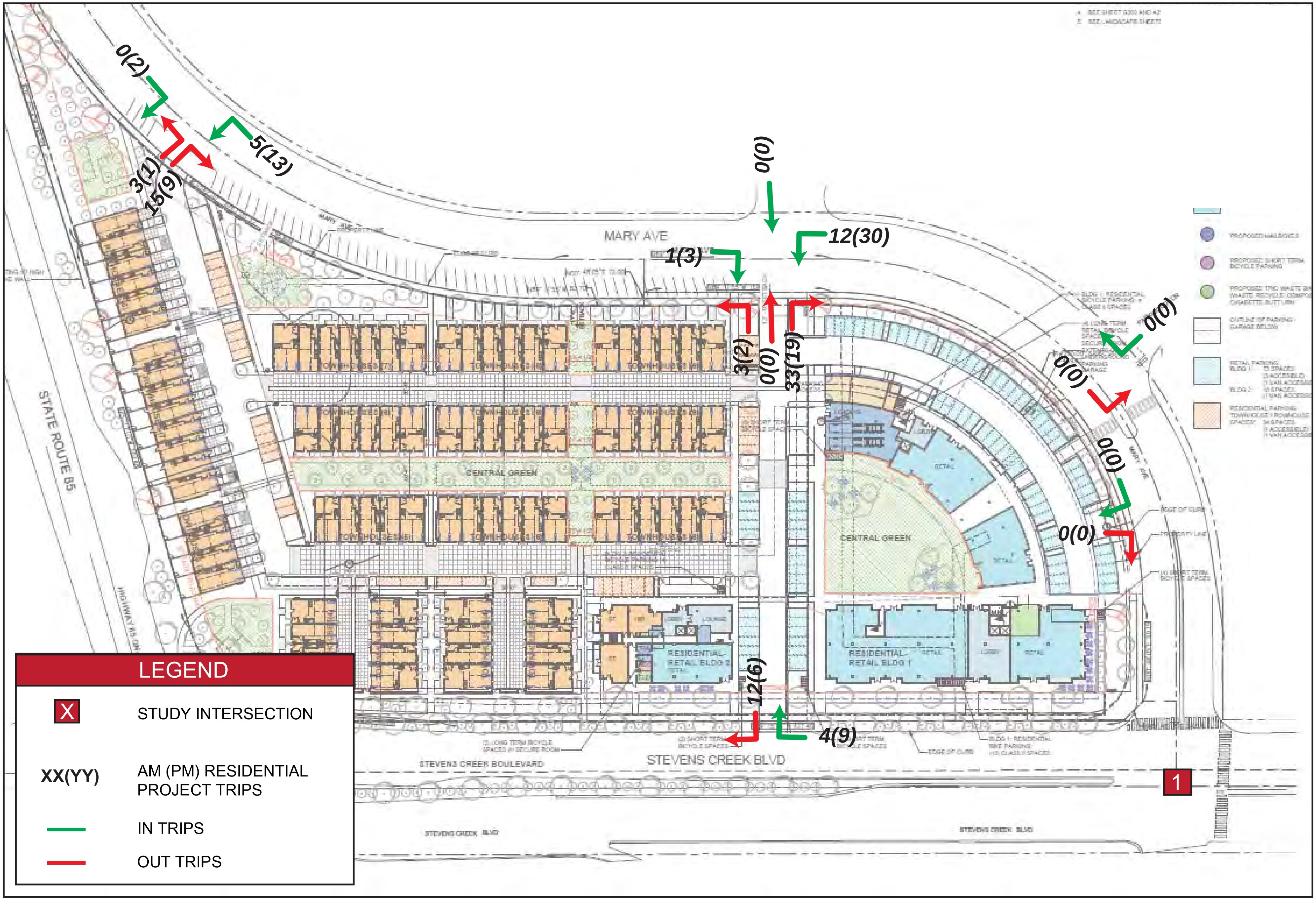
Westport
Figure 3

Proposed Residential Trip Distribution



LEGEND

☒	STUDY INTERSECTION
XX(YY)	AM (PM) RESIDENTIAL PROJECT TRIPS
🟩	IN TRIPS
🟥	OUT TRIPS

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N

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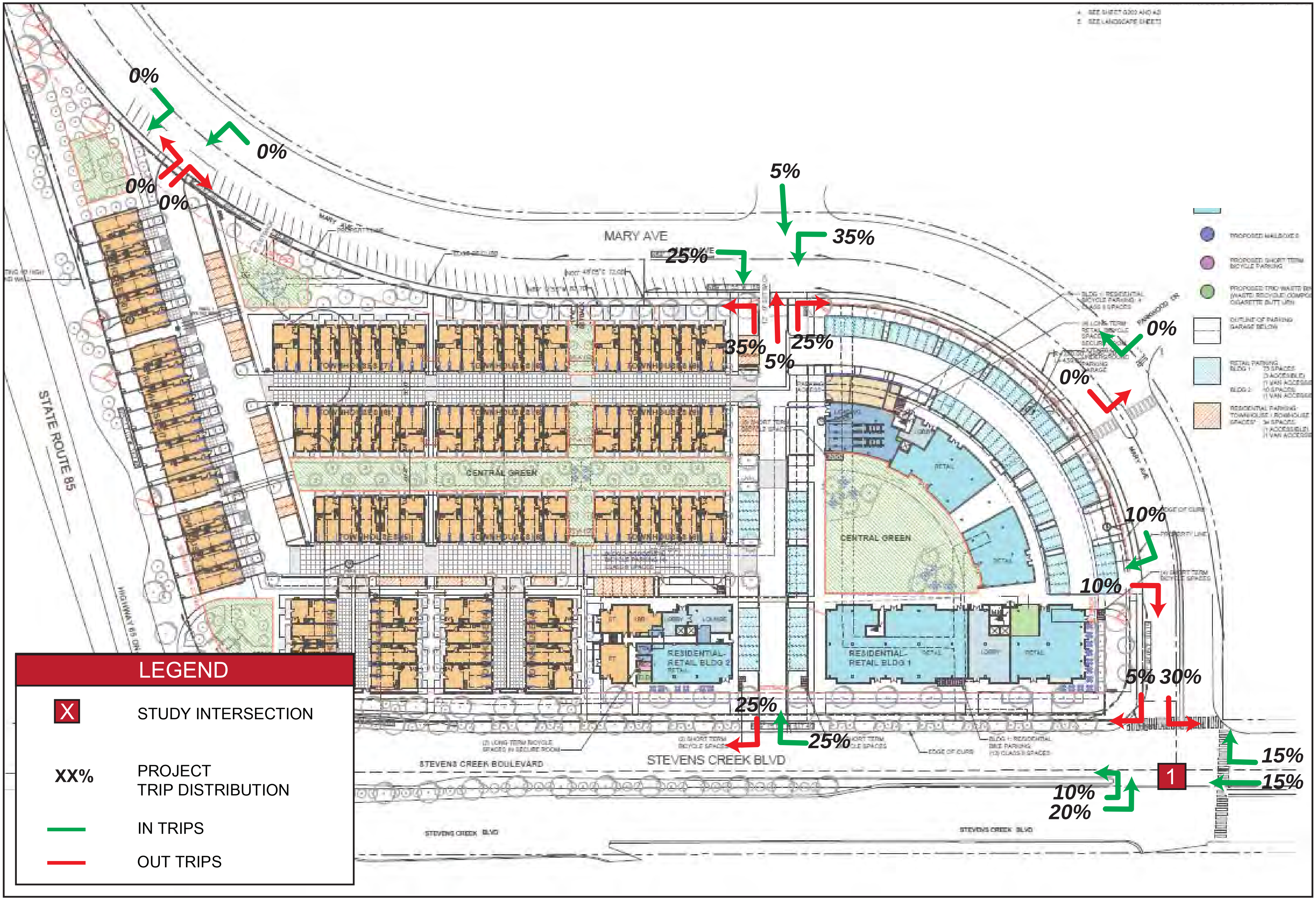
Westport
Figure 4

Proposed Residential Trip Assignment



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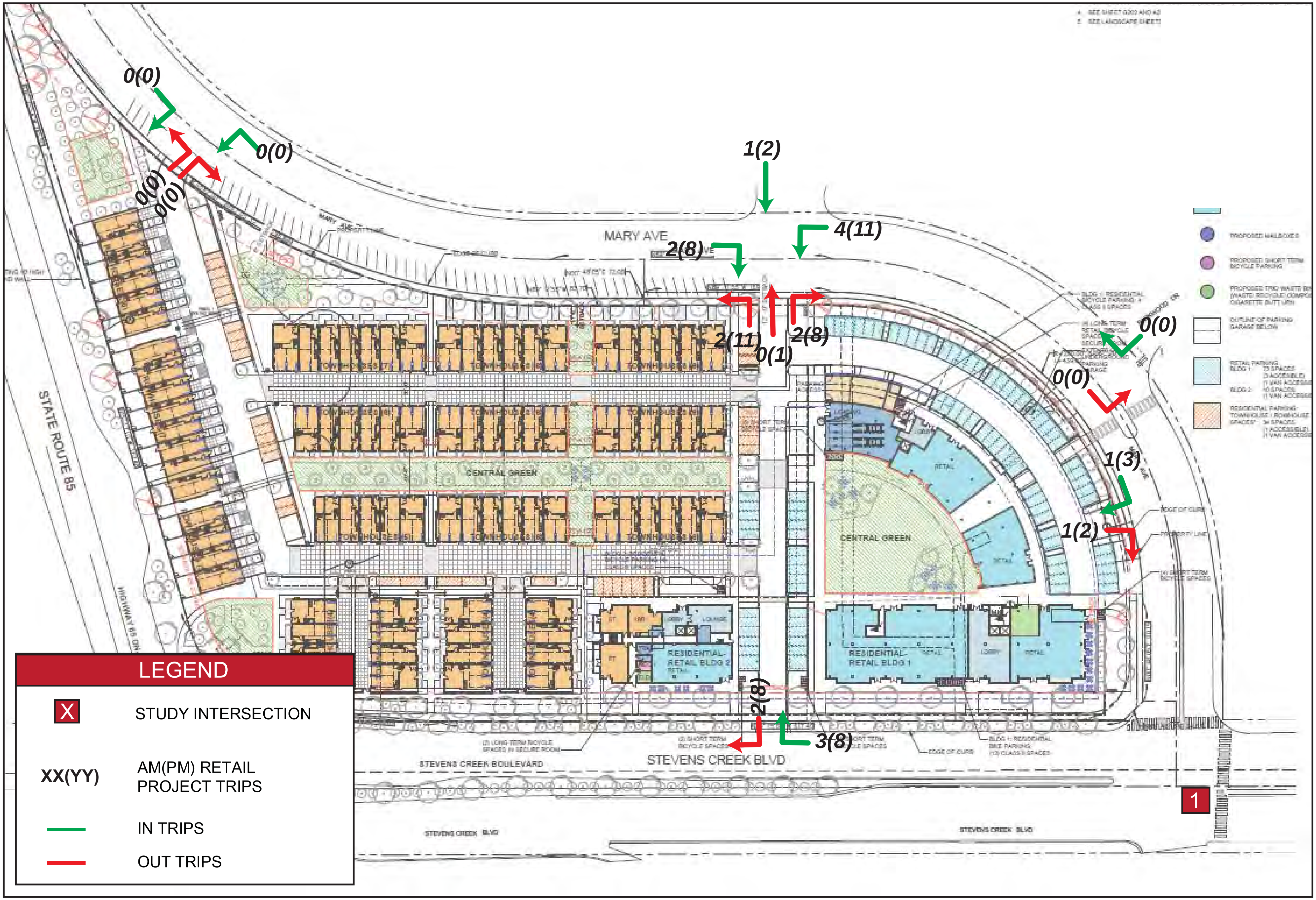
Westport
Figure 5

Proposed Retail Trip Distribution



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Westport
Figure 6

Proposed Retail Trip Assignment

6. Traffic Analysis at Mary Avenue and Stevens Creek Boulevard

Analysis of intersections is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measurement used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. The City of Cupertino 2040 General Plan Amendment Draft EIR states that at signalized intersections, a LOS D is acceptable for both the AM and PM peak hour. The Mary Avenue and Stevens Creek Boulevard intersection is signalized, and therefore, a LOS D or better is required at this intersection.

The intersection of SR-85 Northbound Ramps and Stevens Creek Boulevard was not selected for analysis because only 30% (approximately 44 vehicles) of the net AM outbound traffic would distribute to the intersection. Two-thirds of this westbound arriving traffic (30 vehicles) are expected to travel north onto SR-85 via a free right turn movement. The remaining westbound through traffic on Stevens Creek Boulevard does not warrant analysis, because the VTA CMP threshold of 10 vehicles per lane at the intersection is not met.

Intersection LOS for this study has been determined using methods defined in the HCM 2000 and Synchro traffic analysis software. The analysis has been conducted for the weekday AM and PM peak hours.

6.1 Existing Conditions

Existing Conditions traffic operations were evaluated using existing lane geometry, traffic control, and peak hour traffic volumes. Peak hour traffic volumes were collected by National Data & Surveying Services (NDS) on Wednesday April 25, 2018. **Table 3** illustrates the LOS and delay under Existing Conditions. The existing intersection was determined to be an acceptable LOS C in both the AM peak hour period (31.5-second delay) and PM peak hour period (34.9-second delay).

Table 3 - Existing Conditions Level of Service

Intersection		LOS Criteria	Jurisdiction[1]	Control	Existing (2018)			
					AM Peak		PM Peak	
					LOS	Delay (s)	LOS	Delay (s)
1	Mary Avenue and Stevens Creek Boulevard	D	CUP	Signal	C	31.5	C	34.9

[1]CUP = City of Cupertino

6.2 Existing Plus Project Conditions

Existing Plus Project Conditions traffic operations were evaluated using existing lane geometry, traffic control, and existing peak hour traffic volumes plus net new project volumes. **Figure 7** shows the intersection volumes and **Table 4** shows the LOS and delay at the intersection of Mary Avenue and Stevens Creek Boulevard under Existing Plus Project Conditions. Under Existing Plus Project conditions, the study intersection would remain at an acceptable LOS C during AM (32.6-second delay) and PM peak hours (34.8-second delay). The increase in the AM is approximately 1.1 seconds.

Figure 7 – Existing Plus Project Intersection Volumes

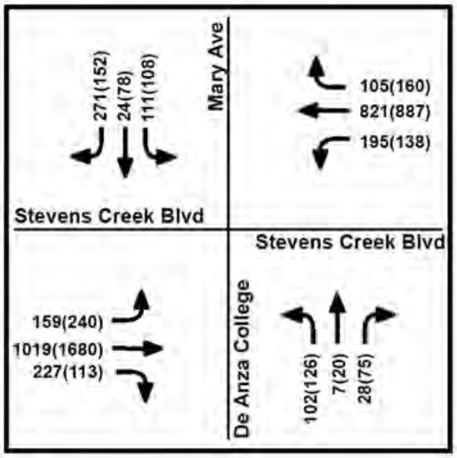


Table 4 - Existing Plus Project Conditions Level of Service

Intersection		LOS Criteria	Jurisdiction[1]	Control	Existing (2018) +Project			
					AM Peak		PM Peak	
					LOS	Delay (s)	LOS	Delay (s)
1	Mary Avenue and Stevens Creek Boulevard	D	CUP	Signal	C	32.6	C	34.8

[1]CUP = City of Cupertino

6.2 Background Plus Project Conditions

No Background Plus Project Conditions were evaluated for the proposed project at the Mary Avenue and Stevens Creek Boulevard intersection, because, for PM peak hour conditions, the net added project volumes would decrease. Therefore, the proposed project would result in no impact. In addition, the PM peak hour presents the worst-case analysis because of the higher existing volumes.

Under Existing Conditions in the AM peak hour, the increase in delay would be less than 1.1-seconds at the intersection of Mary Avenue and Stevens Creek Boulevard. Under Background Plus Project Conditions this increase would be less, because the percentage of project traffic related to background traffic is smaller. This marginal increase in delay does not meet VTA or City of Cupertino standards for generating impacts and the project would have no impact under Background Plus Project Conditions.

6.3 Cumulative Conditions

Traffic operations were evaluated for 2040 Cumulative Conditions based on data presented in the Sandis Traffic Impact Analysis Report, dated February 2017, which references the City of Cupertino General Plan EIR, 2014. It is assumed that the Cumulative Conditions intersection geometry of Mary Avenue and Stevens Creek Boulevard would be the same as Existing Conditions. **Table 5** shows the LOS and delay for the traffic signal at Stevens Creek Boulevard and Mary Avenue for cumulative conditions. Under Cumulative Conditions, the intersection would operate at an acceptable LOS D during the AM peak hour (47.7-second delay) and PM peak hour (46.3-second delay).

Table 5 - Cumulative Conditions Level of Service

Intersection		LOS Criteria	Jurisdiction[1]	Control	Cumulative (2040)			
					AM Peak		PM Peak	
					LOS	Delay (s)	LOS	Delay (s)
1	Mary Avenue and Stevens Creek Boulevard	D	CUP	Signal	D	47.7	D	46.3

[1] *CUP = City of Cupertino*

5.4 Cumulative Plus Project Conditions

Cumulative Plus Project Conditions traffic operations were evaluated using cumulative lane geometry, traffic control, and cumulative peak hour traffic volumes plus net new project volumes. It is assumed that the Cumulative Conditions intersection geometry of Mary Avenue and Stevens Creek Boulevard would be the same as Existing Conditions. **Figure 8** shows the intersection volumes and **Table 6** shows the LOS and delay signalized study intersection at Mary Avenue and Stevens Creek Boulevard. The intersection operates at an acceptable LOS D in both the AM (49.1-second delay) and PM (46.3-second delay) peak hours, as presented in the Cupertino 2040 General Plan Amendment Draft EIR.

Figure 8 – Cumulative Plus Project Intersection Volumes

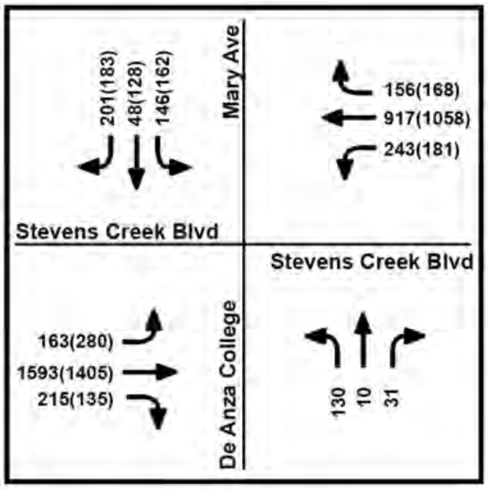


Table 6 - Cumulative Plus Project Conditions Level of Service

Intersection		LOS Criteria	Jurisdiction[1]	Control	Cumulative (2040) + Project			
					AM Peak		PM Peak	
					LOS	Delay (s)	LOS	Delay (s)
1	Mary Avenue and Stevens Creek Boulevard	D	CUP	Signal	D	49.1	D	46.3

[1] *CUP = City of Cupertino*

7. Parking Requirements

Parking requirements for the site were calculated based on on-site supply only and the Park-and-Ride on-street parking along Mary Avenue was not included in the parking analysis. The Mary Avenue on-street parking is public and is not anticipated to be impacted by the site uses or activities. Furthermore, the project has no jurisdiction over the public parking and usage along Mary Avenue. **Table 7** provides the project parking supply and City requirements.

Table 7 – Vehicle Parking Requirements

Land Use	Project Size	City Municipal Code[1]	City Requirement	Project Supply	Surplus (Deficiency)
Row Home / Town Home	2-3 bedrooms: 88	2-3 bedrooms: 2	176	210	34
Building 1					
Retail	17,600 SQFT	1 spaces per 250 SQFT	71	73	2
Multifamily Housing	0-1 bedrooms: 45 2-3 bedrooms: 70	0-1 bedrooms: 1 2-3 bedrooms: 2	185	193	8
Building 2					
Retail	2,400 SQFT	1 spaces per 250 SQFT	10	10	0
Senior Housing	0-1 bedrooms: 39	0-1 bedrooms: 1	39	39	0
Total			**481**	**525**	**44**

[1] City requirements are based on City of Cupertino Municipal Code Chapter 19.124, Section19.56.040A and Table 19.56.040B

Table 8 provides the bicycle parking requirements for the short-term bicycle parking, **Table 9** provides the bicycle parking requirements for long-term retail bicycle parking, and **Table 10** provides the bicycle parking requirements for long-term residential bicycle parking.

Table 8 – Short-Term Bicycle Parking Requirements

Land Use	Project Size	Code Requirements[1]	City Requirement	Project Supply
Building 1	Retail: 17,600 SQFT Residential: 115 DU	Residential:1/10 units (Class II) Retail: 1/1,250 SF (Class II)	Retail: 14.08 Residential: 11.5	Retail: 16 Residential: 12
Building 2	Retail: 2,400 SQFT Residential: 39 DU		Retail: 1.92 Residential: 3.9	Retail: 2 Residential: 4

[1] Short term requirements based on City of Cupertino Municipal Code Chapter 19.124

Table 9 – Long-Term Bicycle Parking Requirements for Retail Only

Land Use	Code Requirements[1]	Vehicle Spaces	Requirement	Project Supply
Building 1 - Retail Only	5% of vehicle spaces (Class I)	73	3.6	4
Building 2 - Retail Only	5% of vehicle spaces (Class I)	10	0.5	2

[1] Long term requirements based on Green Building Standards Non-Residential Mandatory Measure 5.106.4

Table 10 – Long-Term Bicycle Parking Requirements for Multifamily Housing and Senior Apartments

Land Use	Code Requirements[1]	Requirement	Project Supply
Building 1 - 115 DU	1 space per 2 residential units	58	58
Building 2 - 39 DU		20	20

For the parking layouts, refer to Sheet Set A200, A201, and G202 of the C2K Westport plan set for the most up-to-date site plans with parking requirements. Based on the City of Cupertino Municipal code, the proposed project parking is sufficient.

8. Pedestrian Mobility

Continuous sidewalks exist along both Mary Avenue and Stevens Creek Boulevard and the project does not propose to change these sidewalks. The project would connect to the public sidewalks and provide ADA-compliant sidewalk facilities, walkways and paths throughout the site per 2010 ADA Standards for Accessible Design. The Mary Avenue and Stevens Creek Boulevard intersection provides marked crosswalks for pedestrians and bikes on the intersection’s north, east, and south legs. Additionally, a marked crosswalk with a flashing beacon on Mary Avenue provides access to the project site from the Cupertino Memorial Park and Cupertino Senior Center.

De Anza College can be accessed via sidewalks on Mary Avenue and crosswalks at Mary Avenue and Stevens Creek Boulevard. Garden Gate Elementary school can be accessed via residential sidewalks along Mary Avenue and the residential streets.

As such, employees, patrons, and residents choosing to walk to and from the site would not be adversely impacted based on pedestrian mobility and accessibility.

9. Bicycle Mobility

Existing Class II bicycle lanes along Stevens Creek Boulevard and Mary Avenue provide bicycle access to the proposed project site with a long transition to the through lanes across the SR-85 bridge crossing. In the future, the City of Cupertino plans to convert the existing Class II bike lanes to Class IV bikeways on Stevens Creek Boulevard.

To the north, a Class I multi-use bridge over I-280 exists. This path can be accessed from the Mary Avenue Class II bike lanes.

Students have the option to bike to Garden Gate Elementary school by using the Class II bike lane on Mary Avenue and sidewalks along various residential streets.

As such, employees, patrons, and residents choosing to bike to the site would not be adversely impacted based on bicyclist mobility and accessibility.

10. Vehicle Miles Traveled (VMT)

Based on the State's future requirement to conduct vehicle miles traveled (VMT) analysis for projects, a VMT analysis was performed. The VMT was determined by using CalEEMod and was calculated for Existing and Existing Plus Project Conditions. The existing 71,250 SF of commercial space, with 85% occupancy, would produce an approximate annual VMT of 2,782,747 miles, while the proposed project would reduce the annual VMT to 2,662,683 miles.

11. Conclusions

The proposed Project was evaluated to determine if significant impacts would occur at adjacent intersections or Westport Cupertino Project site driveways. The evaluation determined that the proposed Project would generate -275 daily, +47 AM peak hour (-3 IN / 50 OUT), and -22 PM peak hour (4 IN / -26 OUT) net new trips. This trip generation is below the VTA standard of 100 or more net new weekday trips; therefore, a full TIA is not required. This trip generation is also low compared to baseline volumes at adjacent study intersections and roadways, and LOS at Mary Avenue and Stevens Creek Boulevard would not degrade below acceptable levels with the addition of the Project traffic. The PM peak hour volumes are higher than the AM peak hour and present a worst-case scenario. The proposed project would result in a net reduction in PM peak hour trips and daily VMT. During the AM peak hour, the proposed project would add very few trips and would not cause impacts at the intersection of Mary Avenue and Stevens Creek Boulevard. Very few trips would be added to the SR-85 and Stevens Creek Boulevard intersections and would not cause significant impacts.

Based on the analyses conducted in this study, no potentially significant impacts are anticipated to occur due to the proposed Project. There are also no potentially significant impacts triggered by the land plan that have not already been evaluated under the City's General Plan 2040 for redevelopment of the project site.

HCM Signalized Intersection Capacity Analysis
4: MARY AVE & STEVENS CREEK BLVD

Existing

Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	152	1019	227	195	822	106	102	7	28	99	24	239
Future Volume (vph)	152	1019	227	195	822	106	102	7	28	99	24	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.95		1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	4867		1770	4953		3433	1549		1770	1863	1347
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	4867		1770	4953		3433	1549		1770	1863	1347
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.54	0.54	0.54	0.85	0.85	0.85
Adj. Flow (vph)	177	1185	264	227	956	123	189	13	52	116	28	281
RTOR Reduction (vph)	0	28	0	0	12	0	0	49	0	0	0	256
Lane Group Flow (vph)	177	1421	0	227	1067	0	189	16	0	116	28	25
Confl. Peds. (#/hr)			26			23			36			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	15.1	38.6		18.1	42.1		10.7	8.0		13.3	10.6	10.6
Effective Green, g (s)	13.1	36.6		16.1	40.1		8.7	6.0		11.3	8.6	8.6
Actuated g/C Ratio	0.14	0.38		0.17	0.42		0.09	0.06		0.12	0.09	0.09
Clearance Time (s)	4.5	5.0		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	240	1845		295	2058		309	96		207	166	120
v/s Ratio Prot	0.10	c0.29		c0.13	c0.22		0.06	0.01		c0.07	0.02	
v/s Ratio Perm												c0.02
v/c Ratio	0.74	0.77		0.77	0.52		0.61	0.17		0.56	0.17	0.21
Uniform Delay, d1	40.0	26.3		38.4	21.0		42.3	42.9		40.3	40.6	40.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	11.2	2.0		11.4	0.2		3.6	0.8		3.4	0.5	0.9
Delay (s)	51.3	28.3		49.9	21.2		45.8	43.7		43.7	41.1	41.7
Level of Service	D	C		D	C		D	D		D	D	D
Approach Delay (s)		30.8			26.2			45.3			42.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	26.5
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	225	1680	113	138	892	165	126	20	75	123	78	138
Future Volume (vph)	225	1680	113	138	892	165	126	20	75	123	78	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	7.0		6.5	6.0		6.5	6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	0.79		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5037		1770	4836		3433	1297		1770	1863	1313
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5037		1770	4836		3433	1297		1770	1863	1313
Peak-hour factor, PHF	0.80	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88	0.80	0.84	0.84
Adj. Flow (vph)	281	1867	126	148	959	177	143	23	85	154	93	164
RTOR Reduction (vph)	0	5	0	0	16	0	0	80	0	0	0	147
Lane Group Flow (vph)	281	1988	0	148	1120	0	143	28	0	154	93	17
Confl. Peds. (#/hr)						86			140			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	22.7	55.0		14.8	47.1		10.1	8.7		15.1	13.7	13.7
Effective Green, g (s)	20.7	53.0		12.8	45.1		8.1	6.7		13.1	11.7	11.7
Actuated g/C Ratio	0.19	0.47		0.11	0.40		0.07	0.06		0.12	0.10	0.10
Clearance Time (s)	4.5	5.0		4.5	5.0		4.5	4.0		4.5	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	328	2392		203	1954		249	77		207	195	137
v/s Ratio Prot	c0.16	c0.39		0.08	0.23		0.04	0.02		c0.09	c0.05	
v/s Ratio Perm												0.01
v/c Ratio	0.86	0.83		0.73	0.57		0.57	0.36		0.74	0.48	0.13
Uniform Delay, d1	44.0	25.4		47.7	25.8		50.1	50.4		47.6	47.1	45.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.2	2.6		12.3	0.4		3.2	2.9		13.5	1.8	0.4
Delay (s)	63.2	28.0		60.0	26.2		53.3	53.3		61.1	48.9	45.7
Level of Service	E	C		E	C		D	D		E	D	D
Approach Delay (s)		32.4			30.1			53.3			52.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	111.6	Sum of lost time (s)	26.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

4: MARY AVE & STEVENS CREEK BLVD

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	159	1019	227	195	821	105	102	7	28	111	24	271
Future Volume (vph)	159	1019	227	195	821	105	102	7	28	111	24	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.94		1.00	1.00	0.85
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	4866		1770	4953		3433	1548		1770	1863	1345
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	4866		1770	4953		3433	1548		1770	1863	1345
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.54	0.54	0.54	0.85	0.85	0.85
Adj. Flow (vph)	185	1185	264	227	955	122	189	13	52	131	28	319
RTOR Reduction (vph)	0	28	0	0	12	0	0	48	0	0	0	279
Lane Group Flow (vph)	185	1421	0	227	1065	0	189	17	0	131	28	40
Confl. Peds. (#/hr)			26			23			36			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	15.6	38.9		18.1	41.9		10.7	8.8		13.4	11.5	11.5
Effective Green, g (s)	13.6	36.9		16.1	39.9		8.7	6.8		11.4	9.5	9.5
Actuated g/C Ratio	0.14	0.38		0.16	0.41		0.09	0.07		0.12	0.10	0.10
Clearance Time (s)	4.5	5.0		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	246	1837		291	2022		305	107		206	181	130
v/s Ratio Prot	0.10	c0.29		c0.13	0.22		0.06	0.01		c0.07	0.02	
v/s Ratio Perm												c0.03
v/c Ratio	0.75	0.77		0.78	0.53		0.62	0.16		0.64	0.15	0.31
Uniform Delay, d1	40.4	26.7		39.1	21.8		42.9	42.7		41.2	40.4	41.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.2	2.1		12.7	0.2		3.7	0.7		6.3	0.4	1.4
Delay (s)	52.6	28.8		51.8	22.0		46.6	43.4		47.5	40.8	42.4
Level of Service	D	C		D	C		D	D		D	D	D
Approach Delay (s)		31.5			27.2			45.8			43.7	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	97.7	Sum of lost time (s)	26.5
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: MARY AVE & STEVENS CREEK BLVD

Existing Plus Project
Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	240	1680	113	138	887	160	126	20	75	108	78	152
Future Volume (vph)	240	1680	113	138	887	160	126	20	75	108	78	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.96		1.00	0.79		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5037		1770	4756		3433	1299		1770	1863	1314
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5037		1770	4756		3433	1299		1770	1863	1314
Peak-hour factor, PHF	0.80	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88	0.80	0.84	0.84
Adj. Flow (vph)	300	1867	126	148	954	172	143	23	85	135	93	181
RTOR Reduction (vph)	0	5	0	0	16	0	0	80	0	0	0	163
Lane Group Flow (vph)	300	1988	0	148	1110	0	143	28	0	135	93	18
Confl. Peds. (#/hr)						86			140			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	23.8	54.9		14.8	46.4		10.1	9.0		13.9	12.8	12.8
Effective Green, g (s)	21.8	52.9		12.8	44.4		8.1	7.0		11.9	10.8	10.8
Actuated g/C Ratio	0.20	0.48		0.12	0.40		0.07	0.06		0.11	0.10	0.10
Clearance Time (s)	4.5	5.0		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	347	2398		203	1900		250	81		189	181	127
v/s Ratio Prot	c0.17	c0.39		0.08	0.23		0.04	0.02		c0.08	c0.05	
v/s Ratio Perm												0.01
v/c Ratio	0.86	0.83		0.73	0.58		0.57	0.35		0.71	0.51	0.14
Uniform Delay, d1	43.2	25.2		47.5	26.1		49.8	49.9		48.0	47.7	45.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.5	2.5		12.3	0.5		3.1	2.6		12.1	2.5	0.5
Delay (s)	62.7	27.7		59.8	26.6		53.0	52.5		60.0	50.1	46.4
Level of Service	E	C		E	C		D	D		E	D	D
Approach Delay (s)		32.3			30.4			52.8			51.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	111.1	Sum of lost time (s)	26.5
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	156	1593	215	243	918	157	130	10	31	134	48	169
Future Volume (vph)	156	1593	215	243	918	157	130	10	31	134	48	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.94		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	4937		1770	4910		3433	1559		1770	1863	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	4937		1770	4910		3433	1559		1770	1863	1320
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.54	0.54	0.54	0.85	0.85	0.85
Adj. Flow (vph)	181	1852	250	283	1067	183	241	19	57	158	56	199
RTOR Reduction (vph)	0	13	0	0	16	0	0	53	0	0	0	184
Lane Group Flow (vph)	181	2089	0	283	1234	0	241	23	0	158	56	15
Confl. Peds. (#/hr)			26			23			36			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	15.8	47.5		20.3	52.5		12.1	9.1		13.1	10.1	10.1
Effective Green, g (s)	13.8	45.5		18.3	50.5		10.1	7.1		11.1	8.1	8.1
Actuated g/C Ratio	0.13	0.42		0.17	0.47		0.09	0.07		0.10	0.07	0.07
Clearance Time (s)	4.5	5.0		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	225	2070		298	2285		319	102		181	139	98
v/s Ratio Prot	0.10	c0.42		c0.16	c0.25		0.07	0.01		c0.09	c0.03	
v/s Ratio Perm												0.01
v/c Ratio	0.80	1.01		0.95	0.54		0.76	0.22		0.87	0.40	0.15
Uniform Delay, d1	46.0	31.5		44.6	20.7		48.0	48.1		48.0	47.9	47.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.5	22.1		38.3	0.3		9.8	1.1		33.9	1.9	0.7
Delay (s)	64.5	53.6		82.9	21.0		57.8	49.2		82.0	49.8	47.7
Level of Service	E	D		F	C		E	D		F	D	D
Approach Delay (s)		54.4			32.4			55.7			61.1	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	108.5	Sum of lost time (s)	26.5
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	265	1405	135	181	1063	173	251	37	96	180	128	169
Future Volume (vph)	265	1405	135	181	1063	173	251	37	96	180	128	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	7.0		6.5	6.0		6.5	6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	0.79		1.00	1.00	0.82
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5018		1770	4853		3433	1317		1770	1863	1294
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5018		1770	4853		3433	1317		1770	1863	1294
Peak-hour factor, PHF	0.80	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88	0.80	0.84	0.84
Adj. Flow (vph)	331	1561	150	195	1143	186	285	42	109	225	152	201
RTOR Reduction (vph)	0	8	0	0	16	0	0	70	0	0	0	173
Lane Group Flow (vph)	331	1703	0	195	1313	0	285	81	0	225	152	28
Confl. Peds. (#/hr)						86			140			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	27.7	50.3		18.5	41.1		14.9	13.0		20.4	18.5	18.5
Effective Green, g (s)	25.7	48.3		16.5	39.1		12.9	11.0		18.4	16.5	16.5
Actuated g/C Ratio	0.21	0.40		0.14	0.33		0.11	0.09		0.15	0.14	0.14
Clearance Time (s)	4.5	5.0		4.5	5.0		4.5	4.0		4.5	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	378	2016		242	1578		368	120		270	255	177
v/s Ratio Prot	c0.19	c0.34		0.11	0.27		0.08	0.06		c0.13	c0.08	
v/s Ratio Perm												0.02
v/c Ratio	0.88	0.84		0.81	0.83		0.77	0.68		0.83	0.60	0.16
Uniform Delay, d1	45.7	32.6		50.3	37.5		52.2	52.9		49.4	48.7	45.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.7	3.4		17.5	3.9		9.8	14.0		19.3	3.7	0.4
Delay (s)	65.4	36.0		67.8	41.4		62.0	66.9		68.7	52.4	46.1
Level of Service	E	D		E	D		E	E		E	D	D
Approach Delay (s)		40.8			44.8			63.7			56.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	46.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.2	Sum of lost time (s)	26.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

4: MARY AVE & STEVENS CREEK BLVD

Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	163	1593	215	243	917	156	130	10	31	146	48	201
Future Volume (vph)	163	1593	215	243	917	156	130	10	31	146	48	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.94		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	4937		1770	4911		3433	1559		1770	1863	1319
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	4937		1770	4911		3433	1559		1770	1863	1319
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.54	0.54	0.54	0.85	0.85	0.85
Adj. Flow (vph)	190	1852	250	283	1066	181	241	19	57	172	56	236
RTOR Reduction (vph)	0	13	0	0	16	0	0	53	0	0	0	218
Lane Group Flow (vph)	190	2089	0	283	1231	0	241	23	0	172	56	18
Confl. Peds. (#/hr)			26			23			36			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	16.4	47.6		20.3	52.0		12.1	9.4		13.1	10.4	10.4
Effective Green, g (s)	14.4	45.6		18.3	50.0		10.1	7.4		11.1	8.4	8.4
Actuated g/C Ratio	0.13	0.42		0.17	0.46		0.09	0.07		0.10	0.08	0.08
Clearance Time (s)	4.5	5.0		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	234	2067		297	2254		318	105		180	143	101
v/s Ratio Prot	0.11	c0.42		c0.16	c0.25		0.07	0.01		c0.10	c0.03	
v/s Ratio Perm												0.01
v/c Ratio	0.81	1.01		0.95	0.55		0.76	0.22		0.96	0.39	0.18
Uniform Delay, d1	45.9	31.7		44.9	21.3		48.2	48.0		48.7	47.8	47.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.9	22.5		39.4	0.3		9.9	1.0		53.7	1.8	0.9
Delay (s)	64.8	54.1		84.3	21.5		58.1	49.1		102.3	49.6	47.9
Level of Service	E	D		F	C		E	D		F	D	D
Approach Delay (s)		55.0			33.1			55.9			68.3	
Approach LOS		E			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	108.9	Sum of lost time (s)	26.5
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰↰	↱		↰	↑	↱
Traffic Volume (vph)	280	1405	135	181	1058	168	251	37	96	162	128	183
Future Volume (vph)	280	1405	135	181	1058	168	251	37	96	162	128	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.0		6.5	7.0		6.5	6.0		6.5	6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.96		1.00	0.79		1.00	1.00	0.82
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	4972		1770	4774		3433	1316		1770	1863	1293
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	4972		1770	4774		3433	1316		1770	1863	1293
Peak-hour factor, PHF	0.80	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88	0.80	0.84	0.84
Adj. Flow (vph)	350	1561	150	195	1138	181	285	42	109	202	152	218
RTOR Reduction (vph)	0	8	0	0	15	0	0	70	0	0	0	189
Lane Group Flow (vph)	350	1703	0	195	1304	0	285	81	0	203	152	29
Confl. Peds. (#/hr)			26			86			140			87
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	29.2	51.2		18.6	40.6		14.9	13.6		19.1	17.8	17.8
Effective Green, g (s)	27.2	49.2		16.6	38.6		12.9	11.6		17.1	15.8	15.8
Actuated g/C Ratio	0.23	0.41		0.14	0.32		0.11	0.10		0.14	0.13	0.13
Clearance Time (s)	4.5	5.0		4.5	5.0		4.5	4.0		4.5	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	399	2030		243	1529		367	126		251	244	169
v/s Ratio Prot	c0.20	c0.34		0.11	0.27		0.08	0.06		c0.11	c0.08	
v/s Ratio Perm												0.02
v/c Ratio	0.88	0.84		0.80	0.85		0.78	0.65		0.81	0.62	0.17
Uniform Delay, d1	45.0	32.1		50.4	38.3		52.4	52.5		50.1	49.5	46.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.0	3.2		17.2	4.8		9.9	10.8		17.2	4.9	0.5
Delay (s)	64.0	35.3		67.5	43.1		62.3	63.3		67.3	54.4	47.0
Level of Service	E	D		E	D		E	E		E	D	D
Approach Delay (s)		40.2			46.3			62.6			56.2	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	46.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.5	Sum of lost time (s)	26.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Prepared by National Data & Surveying Services

Mary Ave/Campus Dr & Stevens Creek Blvd

Peak Hour Turning Movement Count

ID: 18-08195-001
City: Cupertino

Day: Wednesday
Date: 04/25/2018

PEAK HOURS	COUNT PERIODS
08:45 AM - 09:45 AM	07:00 AM - 10:00 AM
NONE	NONE
05:15 PM - 06:15 PM	04:00 PM - 07:00 PM

Mary Ave/Campus Dr

SOUTHBOUND

	↲	↓	↳	⮌	⇧
AM	239	24	99	0	247
NOON	0	0	0	0	0
PM	138	78	123	0	362
	1	1	1	0	

Stevens Creek Blvd

EASTBOUND

	AM	NOON	PM	
⇦	1181	0	1204	
⮌	18	0	48	0
↱	134	0	177	1
→	1019	0	1680	3
↴	227	0	113	0

CONTROL

Signalized

	AM	NOON	PM
TEV	3020	0	3773
PHF	0.91		0.97

Stevens Creek Blvd

WESTBOUND

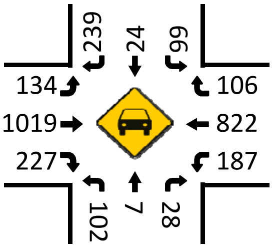
		PM	NOON	AM
0	↰	165	0	106
3	←	892	0	822
1	↲	125	0	187
0	⮌	13	0	8
	⇨	1891	0	1154

NORTHBOUND

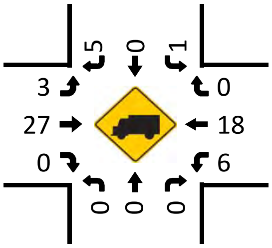
Mary Ave/Campus Dr

	⇩	⮌	↰	↑	↱
		0	2	0.5	0.5
PM	316	0	126	20	75
NOON	0	0	0	0	0
AM	438	0	102	7	28

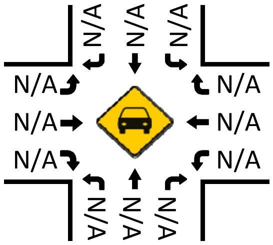
Total Vehicles (AM)



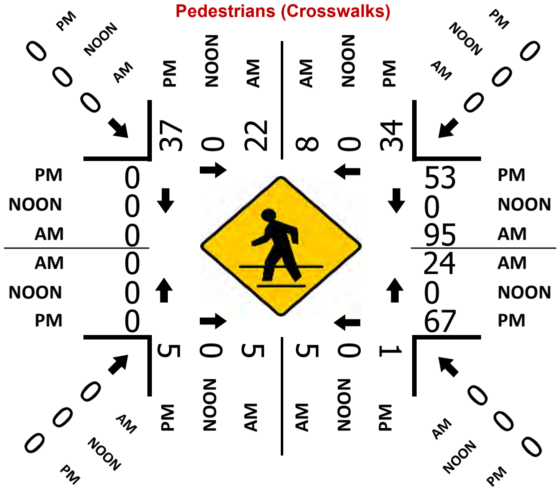
HT (AM)



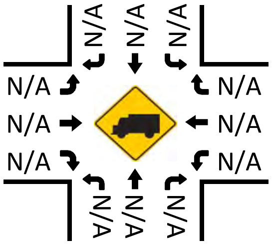
Total Vehicles (Noon)



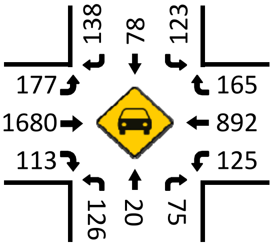
Pedestrians (Crosswalks)



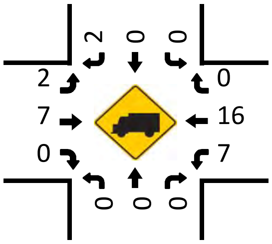
HT (NOON)



Total Vehicles (PM)



HT (PM)



Kimley»Horn

MEMORANDUM

From: Frederik Venter, P.E. and Anthony Nuti, Kimley-Horn and Associates

To: Winnie Pagan and Chad Mosely, City of Cupertino Public Works

Date: September 18, 2019

Re: **Westport Cupertino – Stevens Creek Boulevard & SR 85 On Ramp Signalization Analysis**

The purpose of this memorandum is to present traffic analysis findings for the reconfiguration of the westbound right turn lane at the intersection of Stevens Creek Boulevard and SR 85 Northbound Ramp Terminal for pedestrian and bicycle crossing maneuvers. Level of service and queue analysis for the westbound right turn movement and the overall intersection are discussed in this memo. The effect of the Westport Cupertino mixed-use urban village project (hereinafter referred to as "Westport") on the westbound right turn movement and level of service at the intersection also were evaluated. The Westport project would demolish the existing shopping center (i.e., The Oaks Shopping Center) and construct 203 multi-family residential units, 39 senior units, and 20,000 square feet of retail space.

1. Introduction

The City of Cupertino is planning to reconfigure the existing westbound right turn movement from Stevens Creek Boulevard onto the Northbound State Route 85 On Ramp. This reconfiguration will include the following:

- Convert the existing westbound "free" right turn lane to a signal controlled right turn movement to allow for an exclusive protected phase for pedestrians and cyclists to cross the on-ramp leg.

The purpose of this reconfiguration is to increase pedestrian and bicycle opportunities to cross the on-ramp leg.

For this analysis, the following study intersection was analyzed:

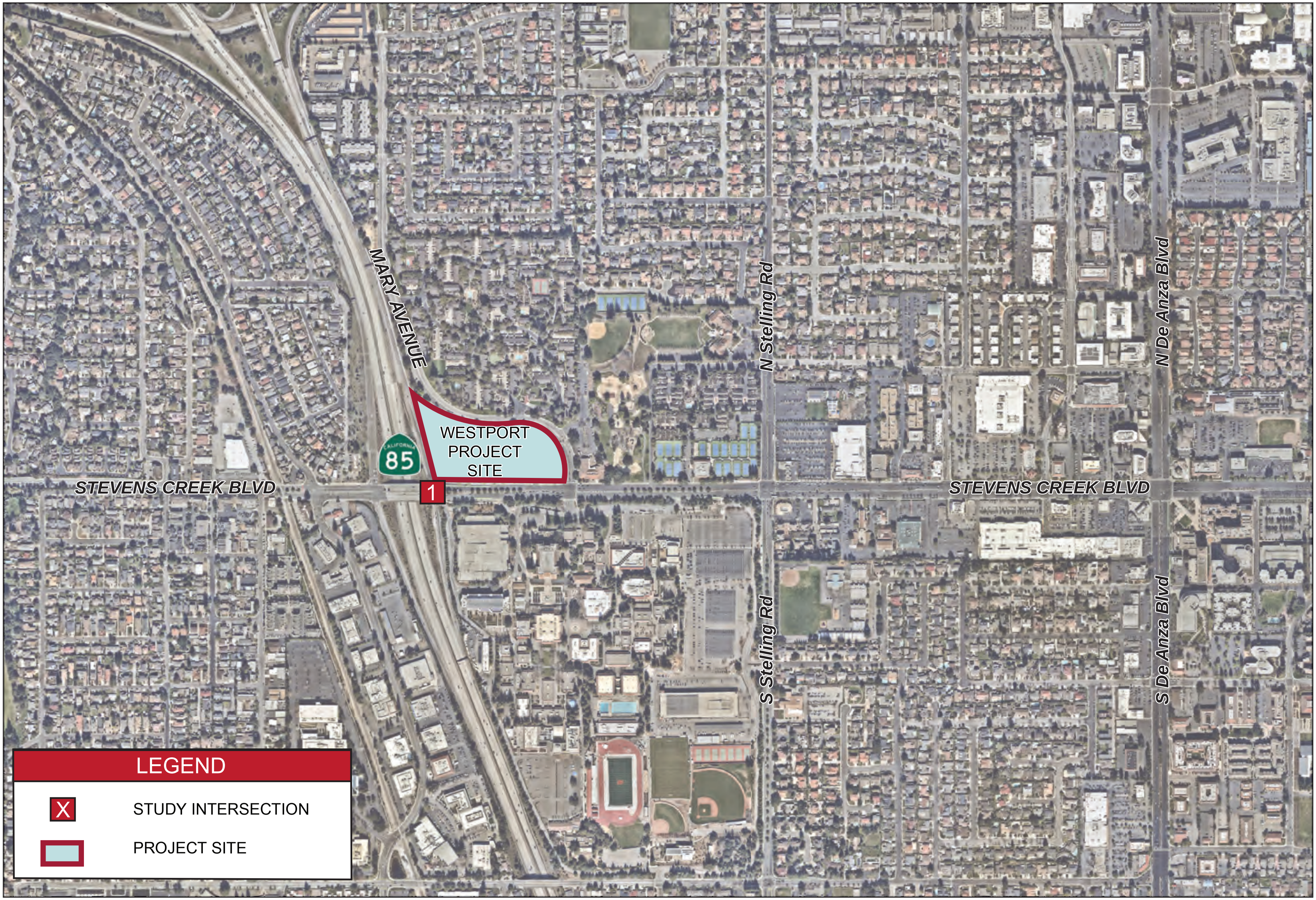
1. Stevens Creek Boulevard & State Route 85 Northbound Ramp Terminal

Figure 1 shows the location of the study intersection.

Figure 2 shows the reconfiguration of the Stevens Creek and Northbound State Route 85 On/Off Ramps provided by Toole Design Group. The planned intersection configuration is in the conceptual design stage.

Figure 3 shows the proposed site plan for the Westport project.

A Simtraffic microsimulation model was prepared for the analysis. The model included the Stevens Creek Boulevard/Mary Avenue intersection to the east and the Stevens Creek Boulevard/SR 85 southbound ramp terminal intersection to the west, to have accurate arrival patterns for the analysis of the study intersection, particularly the westbound right turn movement. No analysis results were reported for these adjacent intersections, since the operations at these locations will remain unaffected with the planned reconfiguration.



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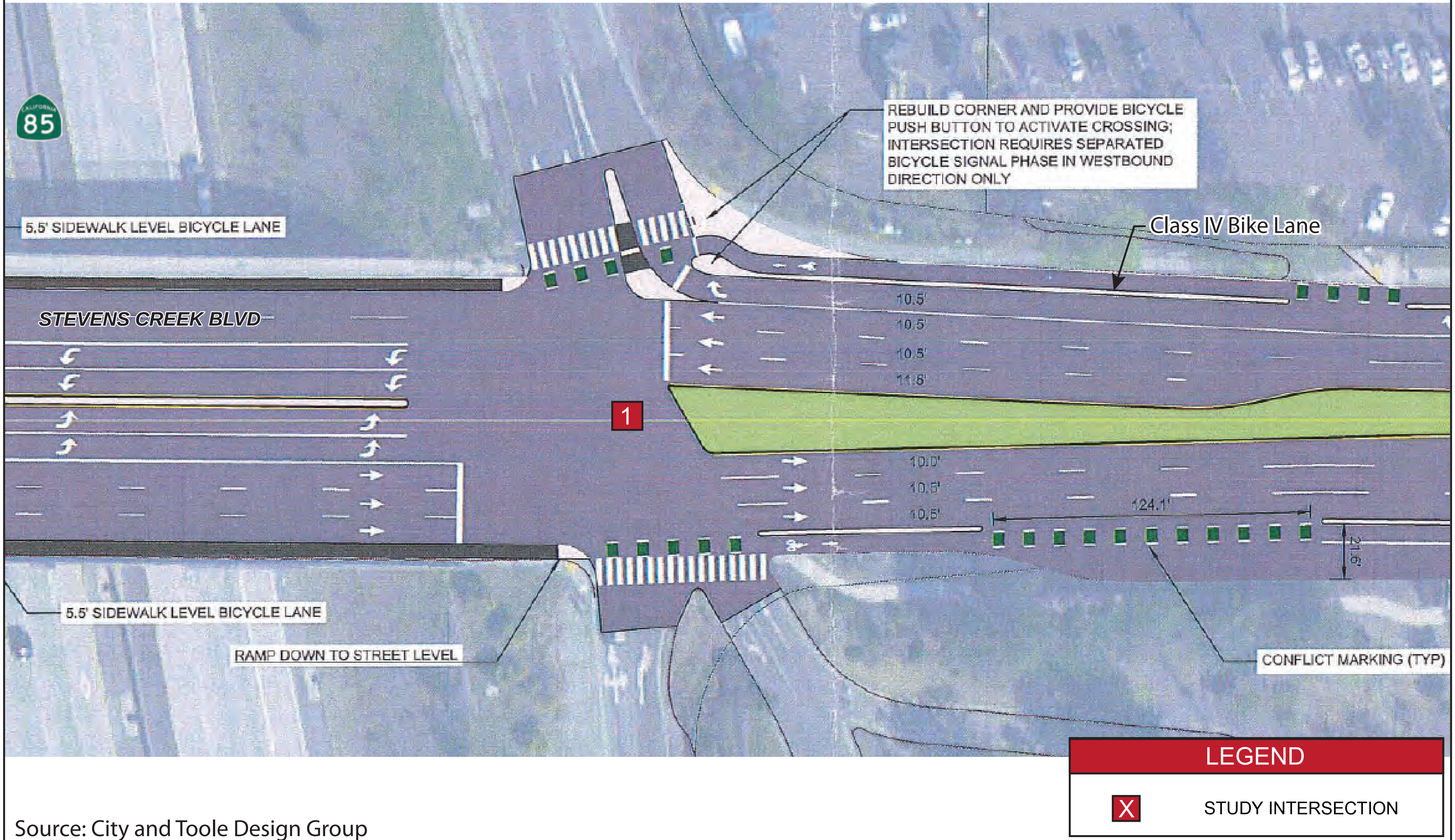
Stevens Creek Blvd & SR 85 Northbound Ramp Terminal Analysis

Figure 1

Project Vicinity



Source: City and Toole Design Group

Note: The proposed layout and median island may have to be modified to comply with Caltrans requirements

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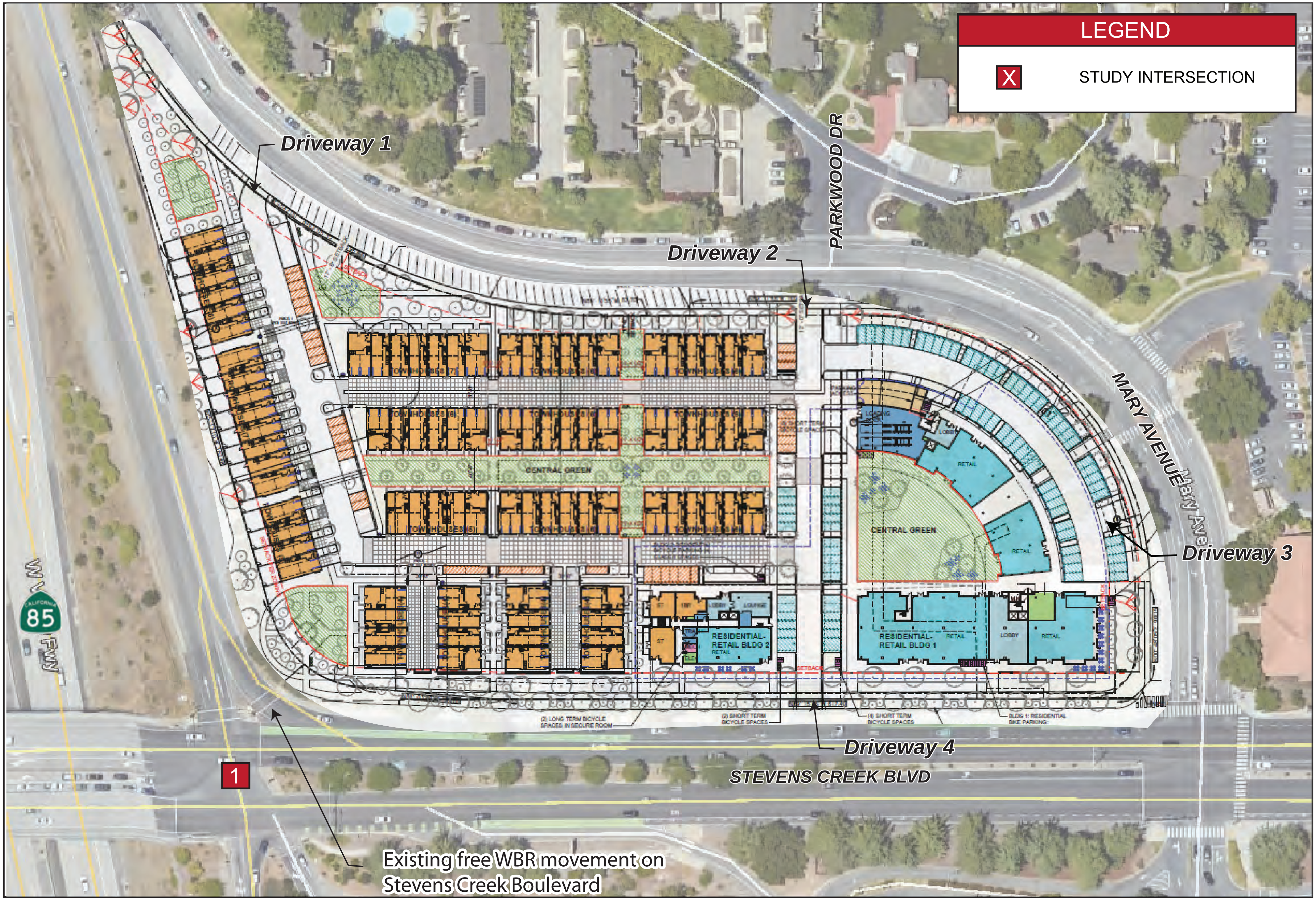
Stevens Creek Blvd & SR 85 NB Ramp Terminal Analysis

Figure 2

Proposed SR 85 NB Ramp Terminal Reconfiguration



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Stevens Creek Blvd & SR 85 NB Ramp Terminal Analysis
Figure 3

Proposed Westport Project Site

2. Analysis Methodology

The Santa Clara Valley Transportation Authority (VTA) Traffic Impact Analysis Guidelines (October 2014), City of Cupertino guidelines, and industry criteria were utilized in this analysis to determine project requirements and potential impacts.

Analysis of the study intersection is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measurement used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity.

Intersection delay and level of service (LOS) calculations were performed using Highway Capacity Manual (HCM) 2000 methodology in Synchro Version 9, which is consistent with TRAFFIX software. Synchro was used instead of TRAFFIX because it provides improved signal timing evaluation at the intersection of Stevens Creek and Northbound State Route 85 On/Off Ramps.

The VTA Congestion Management Plan (CMP) (December 2017) states a LOS E, except for facilities grandfathered in at LOS F, is acceptable for both the AM and PM peak hour at the study intersection. The study intersection is not identified as an intersection operating at LOS F, so a minimum of LOS E is acceptable for the study intersection.

The following scenarios were analyzed for this report in the AM and PM peak hours:

- Existing (2019) Conditions
- Existing (2019) Plus Westport and Signalized Conditions for the Westbound Right Turn Movement
- Cumulative (2040) Conditions
- Cumulative (2040) Plus Westport and Signalized Conditions for the Westbound Right Turn Movement

3. Traffic Analysis

The following section discusses traffic operations at the study intersection of Stevens Creek Boulevard and Northbound State Route 85 Ramp Terminal.

3.1 Existing (2019) Conditions LOS Analysis

Existing Conditions traffic operations were evaluated using existing lane geometry, traffic control, and peak hour traffic, pedestrian, and bicycle volumes. Counts were collected on the following days:

- AM Peak Period: May 23, 2019 (7:00 AM - 10:00 AM)
- PM Peak Period: May 22, 2019 (4:00 PM – 7:00 PM)

Counts were collected when school was in session and the weather was fair.

Current operations at the study intersection include the following:

- Protected left turns on all approaches
- No right turn on red for the Northbound State Route 85 Off Ramp right turn onto Stevens Creek Boulevard
- No right turns allowed for the De Anza Community College approach
- “Free” movements for the westbound right turn from Stevens Creek Boulevard onto the northbound on ramp of State Route 85
- The north leg has a two-stage crosswalk that allows a pedestrian or cyclist to cross the “free” westbound right turn lane when there is a gap in traffic or traffic stops for them and wait on the small refuge island provided. Then they cross the on-ramp lanes using the pedestrian signal-controlled crosswalk.

Even though right turns are not permitted for the De Anza Community College approach, some vehicles were observed performing this movement. In Synchro these vehicles were modeled as through movements since a right turn is an illegal movement.

Figure 4 shows the Existing Conditions Geometry at the study intersection.

Figure 5 shows the vehicle count data, **Figure 6** shows the pedestrian count data, and **Figure 7** shows the bike count data.

Table 1 illustrates the LOS and delay under Existing Conditions.

The 95th percentile queue for the westbound right turn is zero in Existing (2019) Conditions. The movement is a “free” right turn, and cars can perform the movement without stopping. Vehicles currently yield to pedestrians using the crosswalk at the northbound on-ramp; however, the low bicycle and pedestrian volumes do not generate queues when vehicles yield to them as they cross the westbound right turn movement.

The existing intersection currently operates at an acceptable level of service.

Figure 4 – Existing (2019) Conditions Geometry

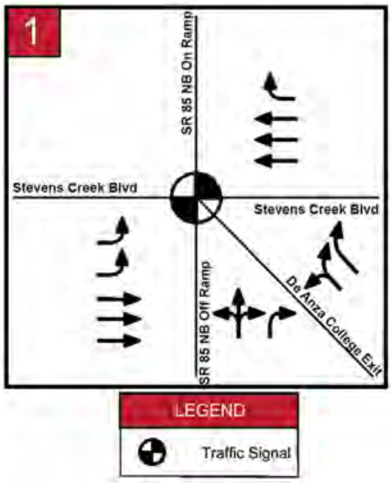

Figure 5 – Existing (2019) Conditions Peak Hour Intersection Volumes

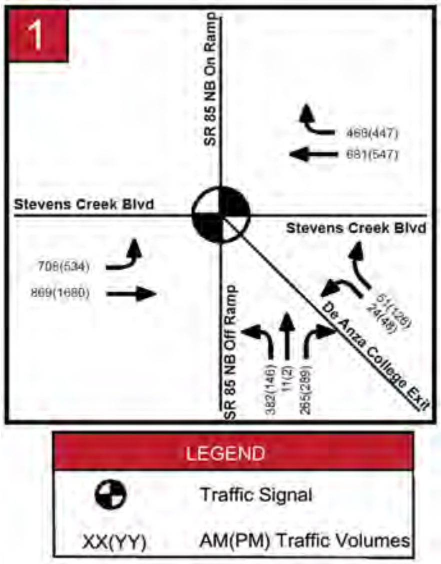

Figure 6 - Existing Peak Hour Pedestrian Count Data

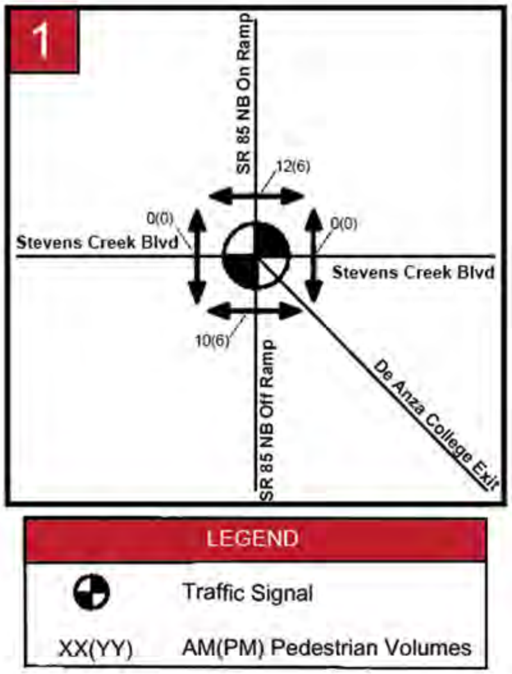

Figure 7 – Existing Peak Hour Bicycle Count Data

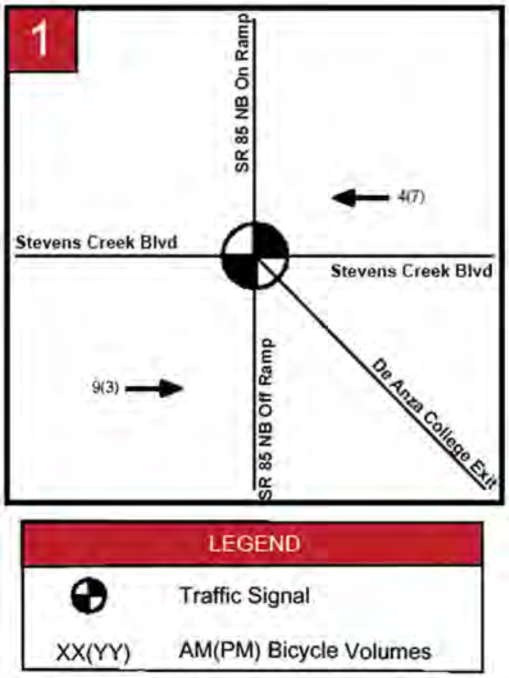

Table 1 - Existing (2019) Conditions Level of Service

Intersection		LOS Criteria	Jurisdiction	Control	Existing (2019)			
					AM Peak		PM Peak	
					LOS	Delay	LOS	Delay
1	Stevens Creek Boulevard and NB SR 85 On/Off Ramps	E	Caltrans	Signal	C	30.0	C	24.7

Notes:

1. Analysis performed using Synchro 10 with HCM 2000 methodologies
2. Delay indicated in seconds/vehicle
3. CMP level of service (LOS) standard for the County is E
4. Intersections that fall below City standards are shown in **bold**

3.2 Trip Generation Estimates and Distribution for the Westport Project

The Westport project would generate -275 net new daily trips, 47 net new AM peak hour trips, and -22 net new PM peak hour trips, consistent with the analysis completed in the Westport Cupertino – Transportation Analysis Memo (November 27, 2018).

Figure 8 illustrates the distribution for the retail uses of the Westport project, while **Figure 9** illustrates the distribution for the residential uses.

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SR 85 Interchange Analysis
Figure 6

Retail Trip Distribution

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SR 85 Interchange Analysis
Figure 7

Residential Trip Distribution

3.3 Existing (2019) Plus Westport Project and Signalized Conditions for the Westbound Right Turn (WBR) Conditions

Traffic operations were evaluated with Synchro and SimTraffic software using the proposed signalized westbound right turn configuration with existing peak hour traffic volumes and adding the Westport project trips.

Figure 10 shows the intersection volumes with the Westport Project implemented. It was also estimated that bicycle and pedestrian volumes would increase by 20% at the crosswalk. This is based on the assumption that the improved facility and the added residential units from the Westport project would generate more pedestrian and bicycle demand. The new pedestrian and bicycle crossing volumes are shown on **Figure 11** and **Figure 12**, respectively.

To be conservative, only a pedestrian signal was analyzed because a pedestrian crossing time is longer than a bicycle crossing time. A shorter bicycle crossing time would produce shorter vehicle queues in the westbound right turn lane than would occur with a longer pedestrian crossing time.

Currently, the westbound right turn movement operates independently from the existing intersection as a “free” right turn. With the addition of signal control for the westbound right turn movement, the cars would have a continuous green right-turn arrow until a cyclist or pedestrian arrives and activates the pedestrian or bike crossing signal, at which time a red right-turn arrow would stop the cars. This pedestrian/bicycle signal call could only occur on the east-west signal phasing plan of the intersection when there are no other conflicting movements with the pedestrian and/or bicycle phase. Queues would only form in the westbound right turn pocket when the right turn arrow is red.

SimTraffic software cannot accurately simulate this signal timing plan because of the random nature of pedestrian and bicycle arrivals/crossings. Thus, an equivalent simulation was developed that is more conservative and assumes a pedestrian or bicycle call with every green east-west phase. In addition, a pedestrian crossing time was used in the simulation, which is higher compared to a bicycle crossing time.

Queues would be generated by the vehicles stopping and waiting for a pedestrian or bicycle to cross when the right turn arrow is red. Queue results after five SimTraffic simulations and HCM 2000 LOS results for the westbound right turn lane are reported in **Table 2**.

Under Existing (2019) Plus Westport and Signalized Conditions, queues for the westbound right turn movement would increase by approximately nine cars in the AM peak hour and ten cars in the PM peak hour compared to existing conditions with no signal control. The overall intersection LOS would also remain at LOS C in both the AM and PM peak hours.

Figure 13 shows the estimated queue lengths and demonstrates that no operational issues would occur.

Note that the queues reported in Table 2 and shown on Figure 13 are the 95th percentile vehicle queues. The 95th percentile queue length value indicates that a queue of this length or less would occur on 95 percent of the signal cycles that include a pedestrian or bicycle call.

It is anticipated that no median will be provided at this location, consistent with the latest Caltrans and VTA policies, and that the curb return would be squared up and the radii sufficient to accommodate truck turns. A pedestrian and cyclist would then cross the on-ramp in one phase (i.e., the current two-stage crossing procedure would be eliminated). The total crosswalk length was determined to be 85 feet, which requires approximately 25 seconds (at a walking speed of 3.5 feet per second) for the pedestrian clearance interval. Right turn on red would not be allowed for the westbound right turn movement to prevent cars from yielding (instead of stopping) to pedestrians.

Figure 10 – Existing (2019) Plus Westport and Signalized Conditions Peak Hour Intersection Volumes

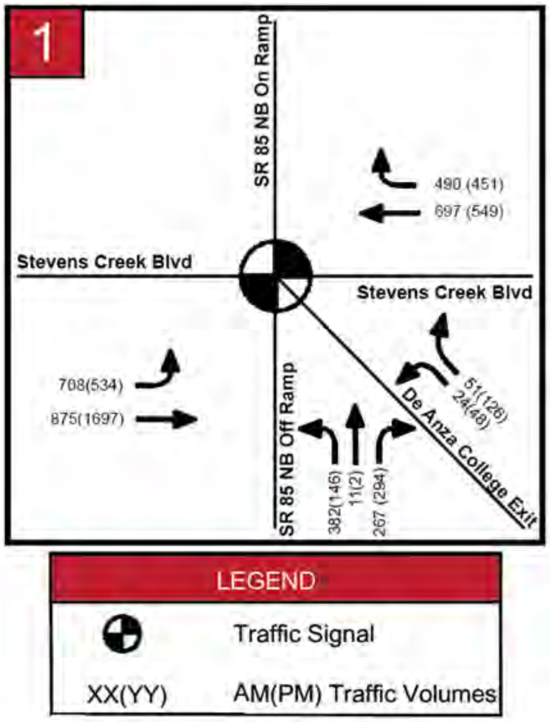


Figure 11 – Existing (2019) Plus Westport and Signalized Conditions Peak Hour Pedestrian Volumes

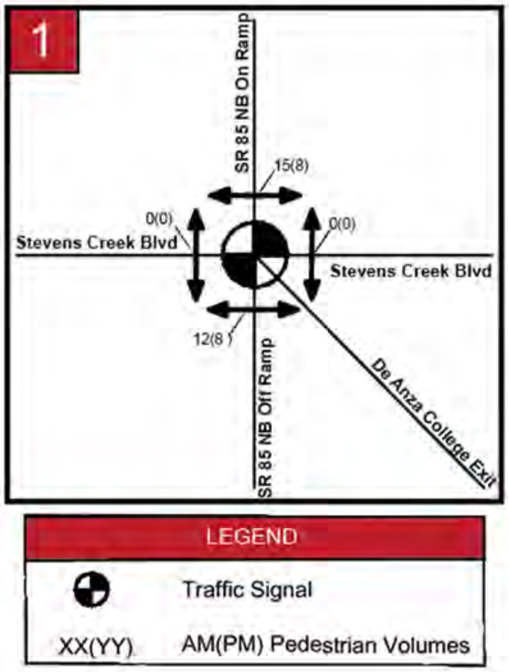


Figure 12 – Existing (2019) Plus Westport and Signalized Conditions Peak Hour Bicycle Volumes

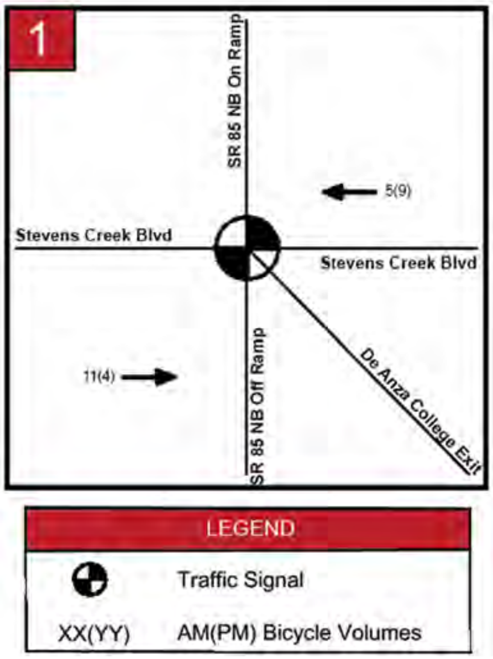


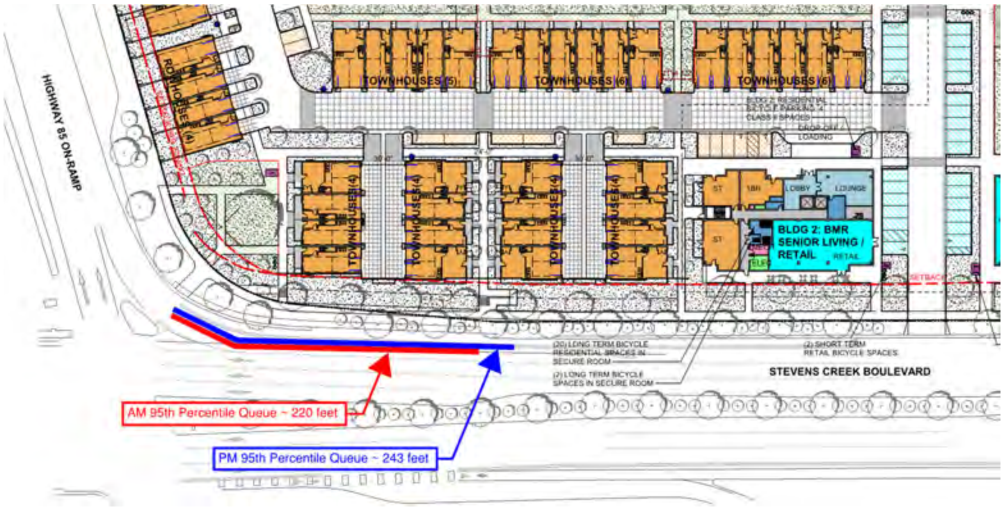
Table 2 - Existing (2019) Plus Westport and Signalized Conditions Queues

	Intersection	MVMT	Existing (2019) + Westport +Signal					
			AM Peak			PM Peak		
			Delay	LOS[1]	95th Percentile Queue[2]	Delay	LOS[1]	95th Percentile Queue[2]
1	Stevens Creek Boulevard and NB SR 85 On/Off Ramps	WBRT	7.6	A	220 ft (9 cars)	8.0	A	243 ft (10 cars)

Notes

1. Analysis performed using Synchro 10 with HCM 2000 methodologies
2. Analysis completed using Simtraffic simulation software

Figure 13 - Existing (2019) Plus Westport and Signalized Conditions Queue Lengths



3.4 Cumulative (2040) Conditions

Traffic operations were evaluated for 2040 Cumulative Conditions based on data obtained from the City of Cupertino General Plan EIR, 2014 (June 6, 2014).

It is assumed that the Cumulative Conditions intersection geometry of State Route 85 and Stevens Creek Boulevard would be the same as Existing Conditions. Accordingly, vehicles would yield to pedestrians and cyclists using the crosswalk at the northbound on-ramp; however, the low bicycle and pedestrian volumes would not generate queues when vehicles yield to them as they cross the intersection.

Figure 14 shows the Cumulative (2040) volumes while **Table 3** shows the LOS and delay for the traffic signal at the study intersection. The queues for the westbound right turn are assumed to be zero because in Cumulative (2040) Conditions, the movement would be "free", and cars would perform this movement without stopping. Vehicles would yield to pedestrians and cyclists using the crosswalk at the northbound on-ramp; however, the low bicycle and pedestrian volumes would not generate queues when vehicles yield to them as they cross the westbound right turn movement.

Under Cumulative (2040) Conditions the intersection would operate at an acceptable level of service.

It should be noted that for the intersection, the PM peak hour reported delay improved with Cumulative (2040) Conditions. The reason for this occurrence is because the trips were predominately added to non-critical movements, which had a lower movement delay than the average intersection delay, and thereby decreases the overall average delay.

Figure 14 – Cumulative (2040) Conditions Peak Hour Intersection Volumes

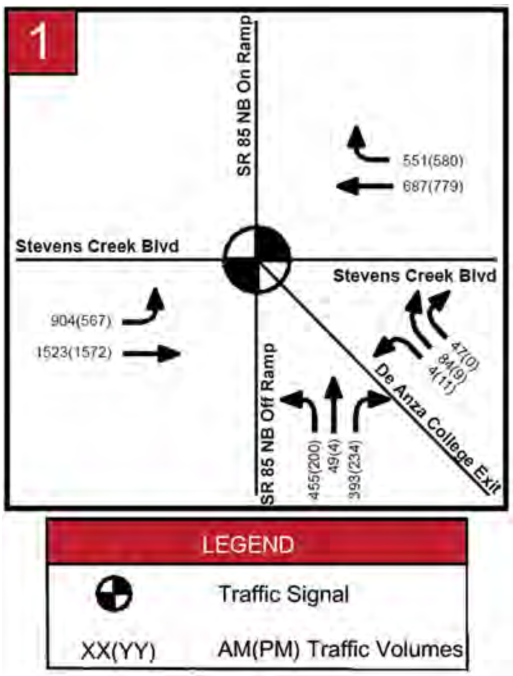


Table 3 – Cumulative (2040) Conditions Level of Service

Intersection		LOS Criteria	Jurisdiction	Control	Cumulative (2040)			
					AM Peak		PM Peak	
					LOS	Delay	LOS	Delay
1	Stevens Creek Boulevard and NB SR 85 On/Off Ramps	E	Caltrans	Signal	D	46.1	C	20.3

Notes:

1. Analysis performed using Synchro 10 with HCM 2000 methodologies
2. Delay indicated in seconds/vehicle
3. CMP level of service (LOS) standard for the County is E
4. Intersections that fall below City standards are shown in **bold**

3.5 Cumulative (2040) Plus Westport Project and Signalized Conditions for the Westbound Right Turn (WBR) Conditions

Traffic operations were evaluated with Synchro and SimTraffic software using the proposed signalized westbound right turn configuration with Cumulative (2040) peak hour traffic volumes and adding the Westport project trips.

Figure 15 shows the intersection volumes with the Westport Project implemented. It was also assumed that bicycle and pedestrian volumes would increase by 20% at the crosswalk. The new pedestrian and bicycle crossing volumes are shown on **Figure 16** and **Figure 17**, respectively**.**

The signal phasing conditions would be the same as for Existing Plus Project conditions. Queues were analyzed for the Cumulative (2040) Plus Westport Project and Signalized WBR Conditions to determine the extent of vehicle queuing that would occur along westbound Stevens Creek Boulevard as a result of the new signal control. Queue results after five SimTraffic simulations and HCM 2000 LOS results for the westbound right turn lane are reported in **Table 4**.

Under Cumulative (2040) Plus Westport and Signalized Conditions, queues for the westbound right turn movement would increase by approximately ten cars in the AM peak hour and twelve cars in the PM peak hour compared to existing conditions with no signal control. The overall intersection LOS would also remain at LOS D in the AM peak hour and LOS C in the PM peak hour.

Figure 18 shows the estimated queue lengths and demonstrates that no operational issues would occur.

Figure 15 - Cumulative (2040) Plus Westport and Signalized Conditions Peak Hour Intersection Volumes

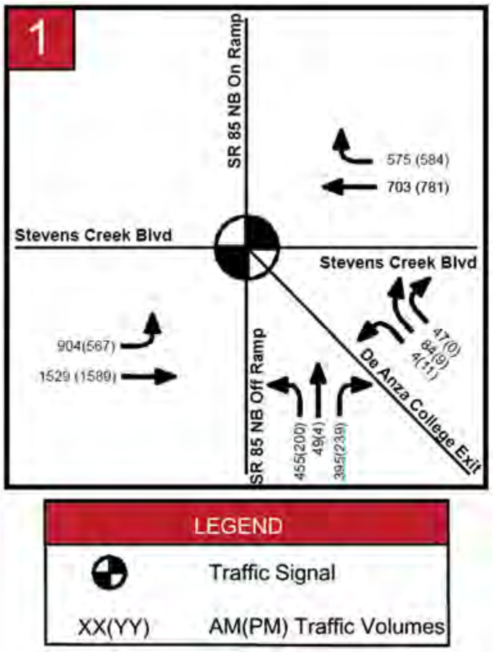


Figure 16 - Cumulative (2040) Plus Westport and Signalized Conditions Peak Hour Pedestrian Volumes

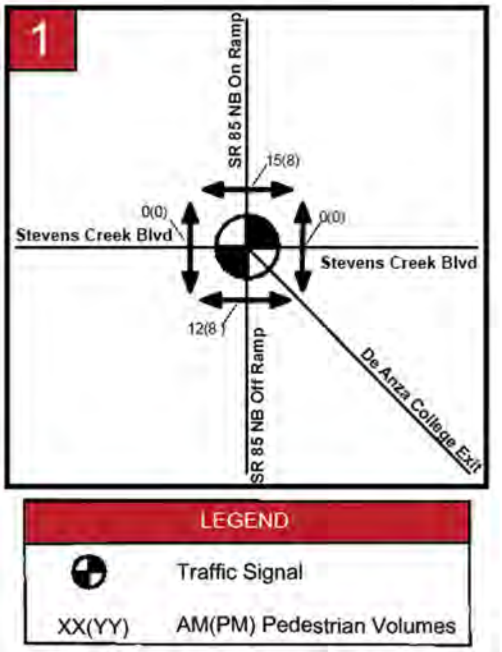


Figure 17 - Cumulative (2040) Plus Westport and Signalized Conditions Peak Hour Bicycle Volumes

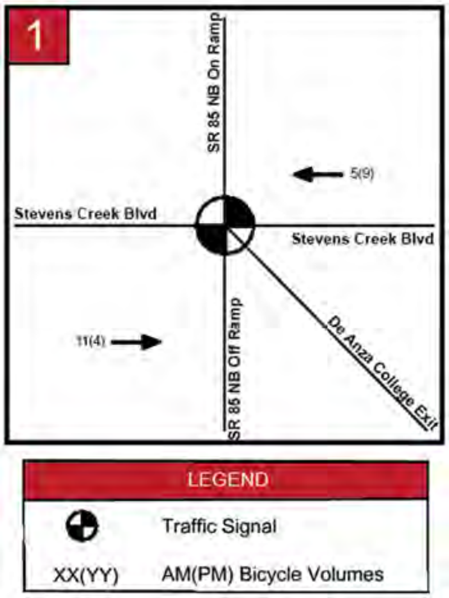


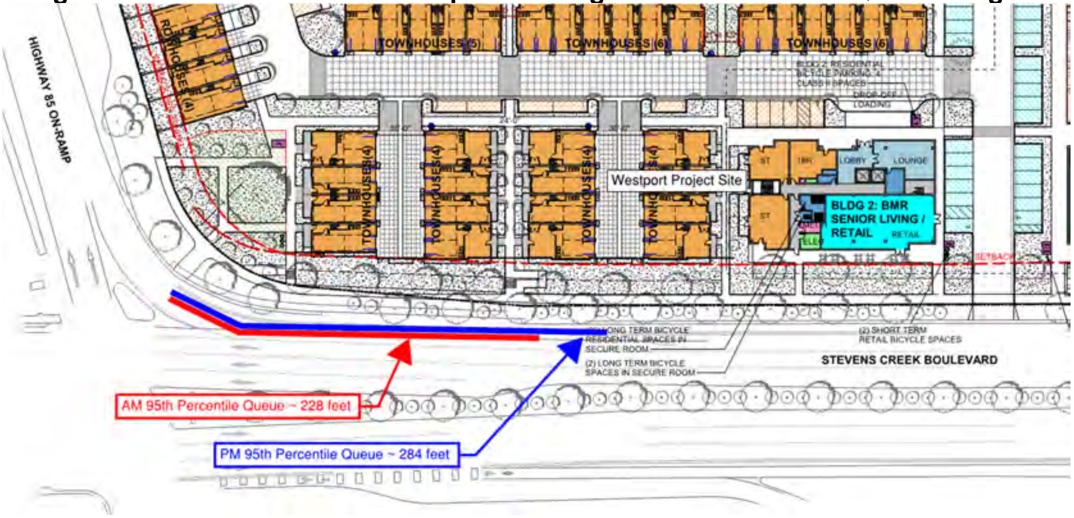
Table 4 - Cumulative (2040) Plus Westport and Signalized Conditions Queues

Intersection		MVMT	Cumulative (2040) + Westport + Signal					
			AM Peak			PM Peak		
			Delay	LOS^1	95th Percentile Queue^2	Delay	LOS^1	95th Percentile Queue^2
1	Stevens Creek Boulevard and NB SR 85 On/Off Ramps	WBRT	8.2	A	246 ft (10 cars)	11.1	B	284 ft (12 cars)

Notes

1. Analysis performed using Synchro 10 with HCM 2000 methodologies
2. Analysis completed using Simtraffic simulation software

Figure 18 - Cumulative Plus Westport and Signalized Conditions Queue Lengths



4. Conclusions

Table 5 provides a summary for the analysis of the proposed bike and pedestrian signal control phase at the intersection of Stevens Creek Boulevard and Northbound State Route 85 On/Off Ramps. With the Westport project and signalization of the westbound right turn movement, the westbound right turn queues would increase during the AM and PM peak hours of traffic. However, the increases would be minimal and would not be substantial enough to cause any operational issues along Stevens Creek Boulevard.

Table 5 - Summary Table

Scenario	Type	AM Peak	PM Peak
Existing (2019) Conditions	Intersection Delay (s)	30.0	24.7
	Intersection LOS	C	C
	WBR 95th Percentile Queue	0 feet	0 feet
Existing (2019) Plus Westport and Signalized Conditions	Intersection Delay (s)	34.3	23.0
	Intersection LOS	C	C
	WBR Delay (s)	7.6	8.0
	WBR LOS	A	A
	WBR 95th Percentile Queue	220 ft (9 cars)	243 ft (10 cars)
Cumulative (2040) Conditions	Intersection Delay (s)	46.1	20.3
	Intersection LOS	D	C
	WBR 95th Percentile Queue	0 feet	0 feet
Cumulative (2040) Plus Westport and Signalized Conditions	Intersection Delay (s)	47.6	24.7
	Intersection LOS	D	C
	WBR Delay (s)	8.2	11.1
	WBR LOS	A	B
	WBR 95th Percentile Queue	246 ft (10 cars)	284 ft (12 cars)

5. APPENDIX

A1: Existing Turning Movement Counts

A2: Existing Conditions Synchro Outputs

A3: Existing Plus Westport and Signal Conditions Synchro Outputs

A4: Cumulative Conditions Synchro Outputs

A5: Cumulative Plus Westport and Signal Conditions Synchro Outputs

A6: Westport Trip Generation

A1: Existing Turning Movement Counts

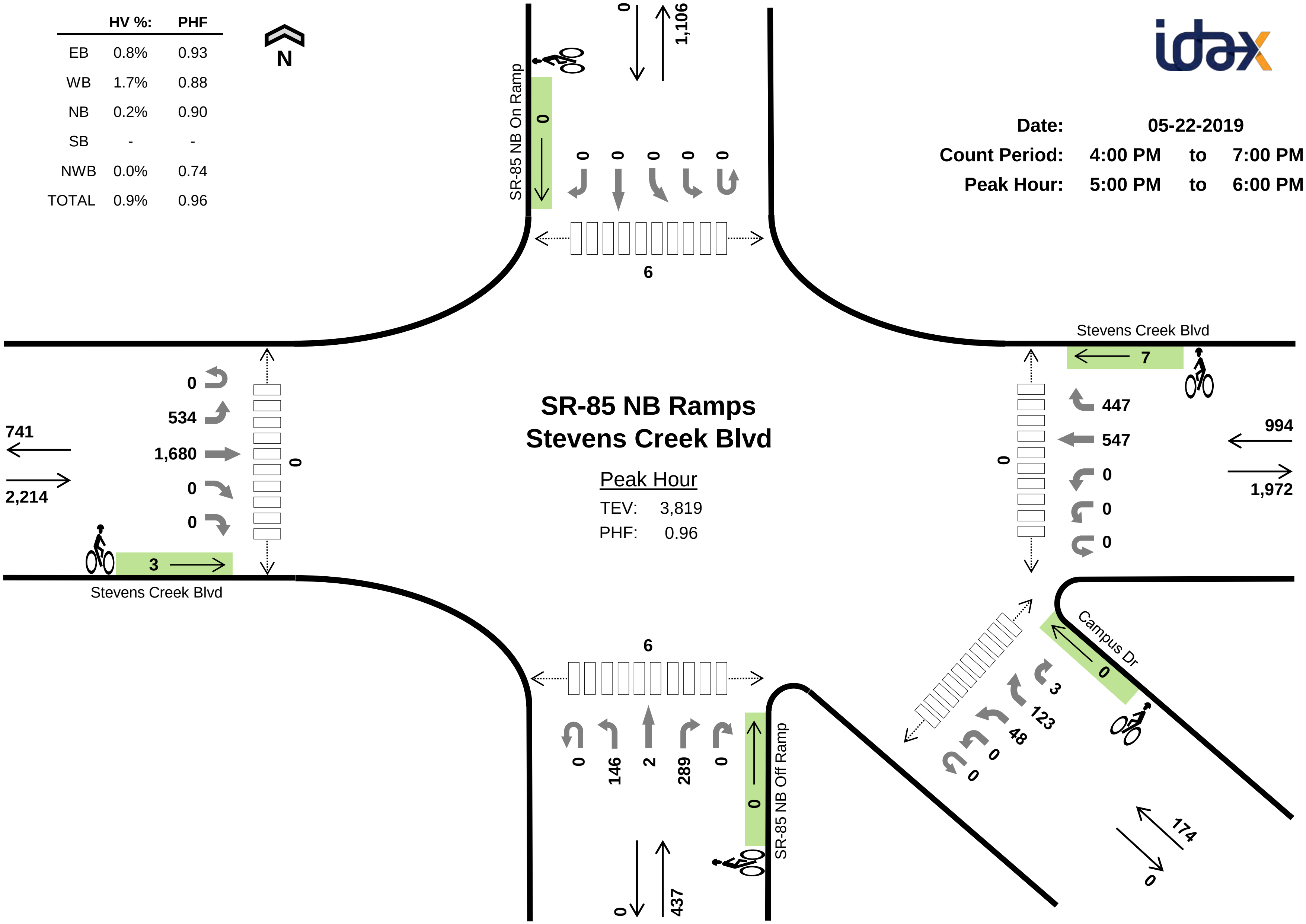
	HV %:	PHF
EB	0.8%	0.93
WB	1.7%	0.88
NB	0.2%	0.90
SB	-	-
NWB	0.0%	0.74
TOTAL	0.9%	0.96

Date: 05-22-2019
Count Period: 4:00 PM to 7:00 PM
Peak Hour: 5:00 PM to 6:00 PM

SR-85 NB Ramps
Stevens Creek Blvd

Peak Hour

TEV: 3,819
PHF: 0.96



Three-Hour Count Summaries

Interval Start	Stevens Creek Blvd					Stevens Creek Blvd					SR-85 NB Off Ramp					SR-85 NB On Ramp					Campus Dr					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northwestbound						
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	115	377	0	0	0	0	0	133	106	0	35	0	38	0	0	0	0	0	0	0	0	14	26	1	845	0
4:15 PM	0	94	424	0	0	0	0	0	114	103	0	55	0	87	0	0	0	0	0	0	0	0	9	14	1	901	0
4:30 PM	0	147	445	0	0	0	0	0	111	102	0	23	0	37	0	0	0	0	0	0	0	0	8	20	2	895	0
4:45 PM	0	113	387	0	0	0	0	0	121	97	0	39	0	47	0	0	0	0	0	0	0	0	7	19	1	831	3,472
5:00 PM	**0**	**135**	**417**	**0**	**0**	**0**	**0**	**0**	**111**	**110**	**0**	**33**	**1**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**32**	**1**	**906**	3,533
5:15 PM	**0**	**128**	**467**	**0**	**0**	**0**	**0**	**0**	**138**	**102**	**0**	**35**	**0**	**82**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**28**	**1**	**991**	3,623
5:30 PM	**0**	**129**	**370**	**0**	**0**	**0**	**0**	**0**	**128**	**122**	**0**	**47**	**0**	**74**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**43**	**0**	**929**	3,657
5:45 PM	**0**	**142**	**426**	**0**	**0**	**0**	**0**	**0**	**170**	**113**	**0**	**31**	**1**	**73**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**20**	**1**	**993**	**3,819**
6:00 PM	0	133	348	0	0	0	0	0	111	108	0	43	0	74	0	0	0	0	0	0	0	0	19	56	1	893	3,806
6:15 PM	0	131	342	0	0	0	0	0	146	118	0	44	1	75	0	0	0	0	0	0	0	0	11	39	2	909	3,724
6:30 PM	0	135	254	0	0	0	0	0	157	122	0	36	1	59	0	0	0	0	0	0	0	0	13	20	3	800	3,595
6:45 PM	0	147	247	0	0	0	0	0	111	121	0	41	0	38	0	0	0	0	0	0	0	0	11	25	5	746	3,348
Count Total	0	1,549	4,504	0	0	0	0	0	1,551	1,324	0	462	4	744	0	0	0	0	0	0	0	0	140	342	19	10,639	0
Peak Hour **All**	**0**	**534**	**1,680**	**0**	**0**	**0**	**0**	**0**	**547**	**447**	**0**	**146**	**2**	**289**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**48**	**123**	**3**	**3,819**	**0**
HV	**0**	**7**	**11**	**0**	**0**	**0**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**0**
HV%	**-**	**1%**	**1%**	**-**	**-**	**-**	**-**	**-**	**3%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0%**	**0%**	**0%**	**1%**	**0**

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	NWB	Total	EB	WB	NB	SB	NWB	Total	East	West	North	South	Southeast	Total
4:00 PM	5	2	0	0	0	*7*	0	0	0	0	0	*0*	0	0	3	4	3	*10*
4:15 PM	1	4	0	0	0	*5*	1	3	0	0	0	*4*	0	0	2	0	0	*2*
4:30 PM	4	2	0	0	0	*6*	0	2	0	0	0	*2*	0	0	0	2	2	*4*
4:45 PM	4	5	0	0	0	*9*	3	2	0	0	0	*5*	0	0	2	3	3	*8*
5:00 PM	**5**	**4**	**0**	**0**	**0**	***9***	**2**	**0**	**0**	**0**	**0**	***2***	**0**	**0**	**3**	**2**	**2**	***7***
5:15 PM	**5**	**6**	**0**	**0**	**0**	***11***	**0**	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**1**	**2**	**2**	***5***
5:30 PM	**6**	**3**	**1**	**0**	**0**	***10***	**0**	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**1**	**2**	**2**	***5***
5:45 PM	**2**	**4**	**0**	**0**	**0**	***6***	**1**	**2**	**0**	**0**	**0**	***3***	**0**	**0**	**1**	**0**	**0**	***1***
6:00 PM	4	1	0	0	5	*10*	2	1	0	0	2	*5*	0	0	1	3	3	*7*
6:15 PM	2	3	0	0	0	*5*	0	0	0	0	0	*0*	0	0	1	1	1	*3*
6:30 PM	2	3	0	0	0	*5*	0	2	0	0	0	*2*	0	0	1	2	2	*5*
6:45 PM	9	3	0	0	0	*12*	0	1	0	0	0	*1*	0	0	2	2	2	*6*
Count Total	49	40	1	0	5	*95*	9	18	0	0	2	*29*	0	0	18	23	22	*63*
Peak Hr	**18**	**17**	**1**	**0**	**0**	***36***	**3**	**7**	**0**	**0**	**0**	***10***	**0**	**0**	**6**	**6**	**6**	***18***

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	Stevens Creek Blvd					Stevens Creek Blvd					SR-85 NB Off Ramp					SR-85 NB On Ramp					Campus Dr					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northwestbound						
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	1	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
4:15 PM	0	1	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
4:30 PM	0	1	3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
4:45 PM	0	1	3	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	27
5:00 PM	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	29
5:15 PM	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	35
5:30 PM	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	39
5:45 PM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**36**
6:00 PM	0	1	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	10	37
6:15 PM	0	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	31
6:30 PM	0	0	2	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	26
6:45 PM	0	1	8	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	32
Count Total	0	15	34	0	0	0	0	0	30	10	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	95	0
Peak Hour	**0**	**7**	**11**	**0**	**0**	**0**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	36	**0**

Three-Hour Count Summaries - Bikes

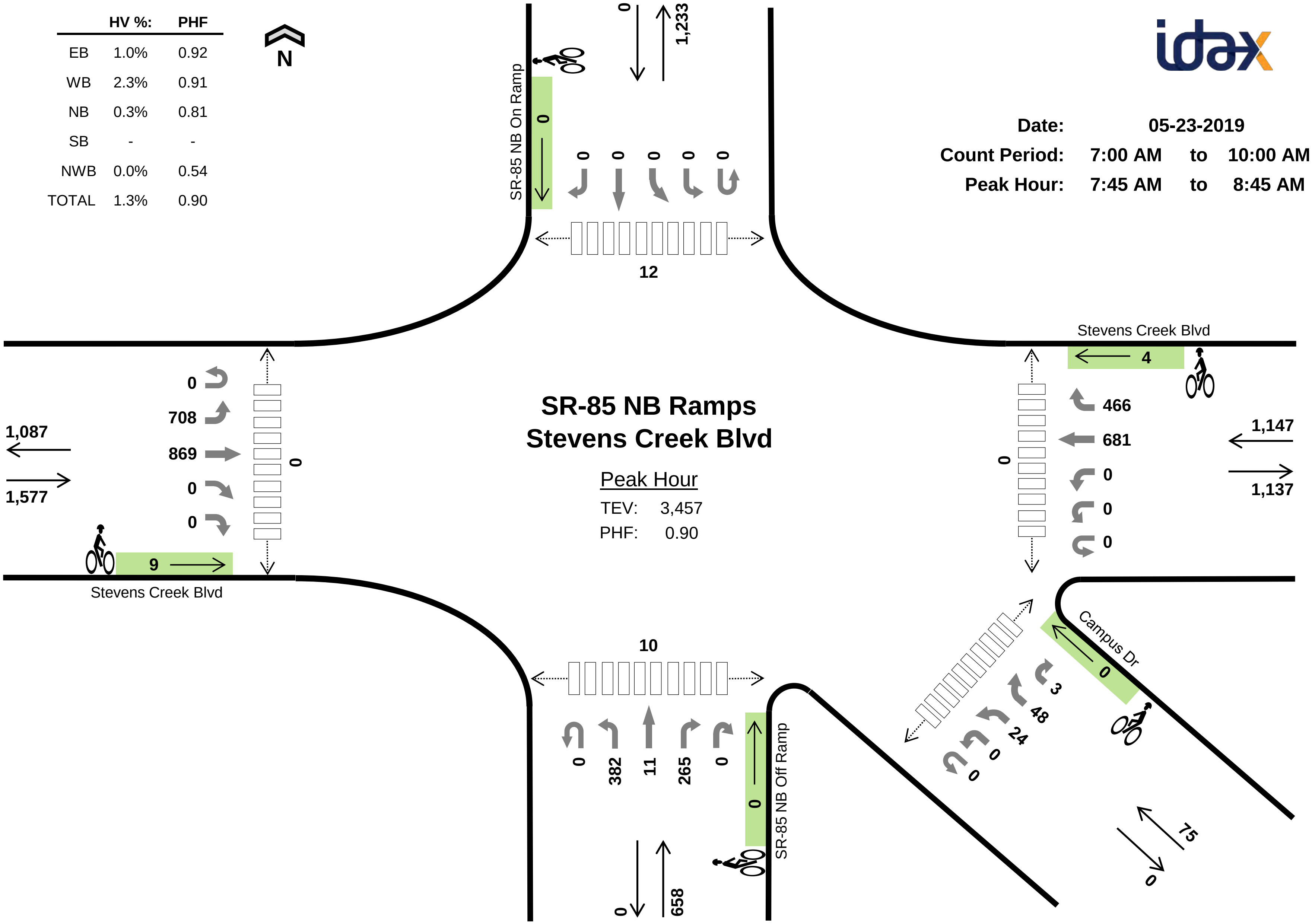
Interval Start	Stevens Creek Blvd					Stevens Creek Blvd					SR-85 NB Off Ramp					SR-85 NB On Ramp					Campus Dr					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northwestbound						
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
4:45 PM	0	0	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	11
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	13
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	13
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	12
5:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**10**
6:00 PM	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5	13
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
6:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10
6:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
Count Total	0	0	9	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	29	0
Peak Hour	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	10	**0**

	HV %:	PHF
EB	1.0%	0.92
WB	2.3%	0.91
NB	0.3%	0.81
SB	-	-
NWB	0.0%	0.54
TOTAL	1.3%	0.90

Date: 05-23-2019

Count Period: 7:00 AM to 10:00 AM

Peak Hour: 7:45 AM to 8:45 AM



SR-85 NB Ramps
Stevens Creek Blvd

Peak Hour

TEV: 3,457

PHF: 0.90

Three-Hour Count Summaries

Interval Start	Stevens Creek Blvd					Stevens Creek Blvd					SR-85 NB Off Ramp					SR-85 NB On Ramp					Campus Dr					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northwestbound						
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	86	96	0	0	0	0	0	50	82	0	44	1	45	0	0	0	0	0	0	0	0	0	2	0	406	0
7:15 AM	0	106	147	0	0	0	0	0	70	103	0	40	0	35	0	0	0	0	0	0	0	0	2	11	0	514	0
7:30 AM	0	149	127	0	0	0	0	0	138	126	0	54	1	38	0	0	0	0	0	0	0	0	2	8	0	643	0
7:45 AM	0	187	206	0	0	0	0	0	188	112	0	75	1	38	0	0	0	0	0	0	0	0	2	12	0	821	2,384
8:00 AM	0	163	212	0	0	0	0	0	157	126	0	106	3	95	0	0	0	0	0	0	0	0	2	4	1	869	2,847
8:15 AM	0	163	265	0	0	0	0	0	201	115	0	94	4	78	0	0	0	0	0	0	0	0	13	21	1	955	3,288
8:30 AM	0	195	186	0	0	0	0	0	135	113	0	107	3	54	0	0	0	0	0	0	0	0	7	11	1	812	3,457
8:45 AM	0	139	167	0	0	0	0	0	138	127	0	104	3	67	0	0	0	0	0	0	0	0	8	11	0	764	3,400
9:00 AM	0	126	193	0	0	0	0	0	110	109	0	56	0	44	0	0	0	0	0	0	0	0	3	15	2	658	3,189
9:15 AM	0	145	283	0	0	0	0	0	107	131	0	21	1	49	0	0	0	0	0	0	0	0	12	34	0	783	3,017
9:30 AM	0	191	187	0	0	0	0	0	114	163	0	24	1	20	0	0	0	0	0	0	0	0	12	32	0	744	2,949
9:45 AM	0	169	186	0	0	0	0	0	97	140	0	30	0	29	0	0	0	0	0	0	0	0	8	18	0	677	2,862
Count Total	0	1,819	2,255	0	0	0	0	0	1,505	1,447	0	755	18	592	0	0	0	0	0	0	0	0	71	179	5	8,646	0
Peak Hour All	0	708	869	0	0	0	0	0	681	466	0	382	11	265	0	0	0	0	0	0	0	0	24	48	3	3,457	0
Peak Hour HV	0	4	12	0	0	0	0	0	13	13	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	44	0
Peak Hour HV%	-	1%	1%	-	-	-	-	-	2%	3%	-	0%	9%	0%	-	-	-	-	-	-	-	-	0%	0%	0%	1%	0

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	NWB	Total	EB	WB	NB	SB	NWB	Total	East	West	North	South	Southeast	Total
7:00 AM	5	8	2	0	0	15	1	0	0	0	0	1	0	0	3	0	0	3
7:15 AM	6	7	1	0	0	14	2	0	0	0	0	2	0	0	0	1	1	2
7:30 AM	4	2	0	0	0	6	0	2	0	0	0	2	0	0	2	1	1	4
7:45 AM	5	9	0	0	0	14	1	2	0	0	0	3	0	0	1	0	0	1
8:00 AM	2	8	0	0	0	10	3	0	0	0	0	3	0	0	4	4	4	12
8:15 AM	3	6	1	0	0	10	2	2	0	0	0	4	0	0	6	3	3	12
8:30 AM	6	3	1	0	0	10	3	0	0	0	0	3	0	0	1	3	3	7
8:45 AM	6	9	1	0	0	16	0	0	0	0	0	0	0	0	5	1	1	7
9:00 AM	5	8	1	0	0	14	0	0	1	0	0	1	0	0	1	6	6	13
9:15 AM	5	7	0	0	0	12	2	0	0	0	0	2	0	0	1	5	5	11
9:30 AM	9	4	1	0	0	14	2	3	0	0	0	5	0	0	6	2	2	10
9:45 AM	5	7	0	0	1	13	0	0	0	0	0	0	0	0	2	4	4	10
Count Total	61	78	8	0	1	148	16	9	1	0	0	26	0	0	32	30	30	92
Peak Hr	16	26	2	0	0	44	9	4	0	0	0	13	0	0	12	10	10	32

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	Stevens Creek Blvd					Stevens Creek Blvd					SR-85 NB Off Ramp					SR-85 NB On Ramp					Campus Dr					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northwestbound						
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	5	0	0	0	0	0	3	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	15	0
7:15 AM	0	1	5	0	0	0	0	0	3	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
7:30 AM	0	1	3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
7:45 AM	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**5**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	49
8:00 AM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	44
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	40
8:30 AM	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**44**
8:45 AM	0	5	1	0	0	0	0	0	4	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16	46
9:00 AM	0	5	0	0	0	0	0	0	5	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14	50
9:15 AM	0	1	4	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	52
9:30 AM	0	3	6	0	0	0	0	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14	56
9:45 AM	0	1	4	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	13	53
Count Total	0	21	40	0	0	0	0	0	38	40	0	5	1	2	0	0	0	0	0	0	0	0	0	1	0	148	0
Peak Hour	**0**	**4**	**12**	**0**	**0**	**0**	**0**	**0**	**13**	**13**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	44	**0**

Three-Hour Count Summaries - Bikes

Interval Start	Stevens Creek Blvd					Stevens Creek Blvd					SR-85 NB Off Ramp					SR-85 NB On Ramp					Campus Dr					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Northwestbound						
	UT	LT	TH	BR	RT	UT	HL	LT	TH	RT	UT	LT	TH	RT	HR	UT	LT	BL	TH	RT	UT	HL	BL	BR	HR		
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:30 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	8
8:00 AM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	10
8:15 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	12
8:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**13**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	8
9:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
9:30 AM	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	8
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Count Total	0	0	16	0	0	0	0	0	9	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	26	0
Peak Hour	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	13	**0**

A2: Existing Conditions Synchro Outputs

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✣	↱	↰↱	↰
Traffic Volume (vph)	708	869	681	466	382	11	265	24	51
Future Volume (vph)	708	869	681	466	382	11	265	24	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	3123	5644	5588	1433		1731	1731	1748	1900
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	3123	5644	5588	1433		1731	1731	1748	1900
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	708	869	681	466	382	11	265	24	51
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	708	869	681	466	0	420	238	39	36
Confl. Peds. (#/hr)	12			12					
Confl. Bikes (#/hr)				4					
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%
Turn Type	Prot	NA	NA	Free	Split	NA	Perm	Prot	Prot
Protected Phases	7	4	8		2	2		1	1
Permitted Phases				Free			2		
Actuated Green, G (s)	26.7	45.8	15.1	93.2		29.8	29.8	5.6	5.6
Effective Green, g (s)	24.7	43.8	13.1	93.2		27.8	27.8	3.6	3.6
Actuated g/C Ratio	0.27	0.47	0.14	1.00		0.30	0.30	0.04	0.04
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	827	2652	785	1433		516	516	67	73
v/s Ratio Prot	c0.23	0.15	c0.12			c0.24		0.02	0.02
v/s Ratio Perm				c0.33			0.14		
v/c Ratio	0.86	0.33	0.87	0.33		0.81	0.46	0.58	0.49
Uniform Delay, d1	32.6	15.5	39.2	0.0		30.3	26.6	44.1	43.9
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	8.7	0.1	10.0	0.6		9.5	0.7	12.2	5.2
Delay (s)	41.2	15.5	49.2	0.6		39.8	27.3	56.3	49.1
Level of Service	D	B	D	A		D	C	E	D
Approach Delay (s)		27.1	29.4			35.3		52.8	
Approach LOS		C	C			D		D	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	24.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✥	↱	Y	↱
Traffic Volume (vph)	534	1680	547	447	146	2	289	48	126
Future Volume (vph)	534	1680	547	447	146	2	289	48	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0		7.0	7.0	7.0	7.0
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	3123	5644	5588	1434		1731	1731	1748	1900
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	3123	5644	5588	1434		1731	1731	1748	1900
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	534	1680	547	447	146	2	289	48	126
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	534	1680	547	447	0	226	211	90	84
Confl. Peds. (#/hr)	6			6					
Confl. Bikes (#/hr)				7					
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%
Turn Type	Prot	NA	NA	Free	Split	NA	Perm	Prot	Prot
Protected Phases	7	4	8		2	2		1	1
Permitted Phases				Free			2		
Actuated Green, G (s)	21.6	42.5	15.9	87.6		18.2	18.2	11.9	11.9
Effective Green, g (s)	19.6	40.5	13.9	87.6		16.2	16.2	9.9	9.9
Actuated g/C Ratio	0.22	0.46	0.16	1.00		0.18	0.18	0.11	0.11
Clearance Time (s)	5.0	5.0	5.0			5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	698	2609	886	1434		320	320	197	214
v/s Ratio Prot	0.17	c0.30	0.10			c0.13		0.05	0.04
v/s Ratio Perm				c0.31			0.12		
v/c Ratio	0.77	0.64	0.62	0.31		0.71	0.66	0.46	0.39
Uniform Delay, d1	31.8	18.0	34.4	0.0		33.5	33.1	36.3	36.1
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.0	0.6	1.3	0.6		6.9	4.9	1.7	1.2
Delay (s)	36.8	18.6	35.7	0.6		40.4	38.0	38.0	37.2
Level of Service	D	B	D	A		D	D	D	D
Approach Delay (s)		23.0	19.9			39.2		37.6	
Approach LOS		C	B			D		D	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	87.6	Sum of lost time (s)	28.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

A3: Existing Plus Westport and Signal Conditions Synchro Outputs

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	B19	B19	NB
Directions Served	L	L	T	T	T	T	T	T	R	T	T	LTR
Maximum Queue (ft)	358	360	175	176	201	125	223	208	245	13	57	514
Average Queue (ft)	286	295	78	74	84	42	109	91	93	1	3	485
95th Queue (ft)	396	402	147	149	163	99	199	181	220	8	27	591
Link Distance (ft)	346	346	346	346	346	176	176	176	176	591	591	436
Upstream Blk Time (%)	8	11					2	1	3			68
Queuing Penalty (veh)	33	44					7	3	8			0
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	NB	B27	NW	NW
Directions Served	R	T	LR	R
Maximum Queue (ft)	485	601	74	65
Average Queue (ft)	234	433	43	19
95th Queue (ft)	483	812	81	53
Link Distance (ft)	436	559	69	69
Upstream Blk Time (%)	1	57	7	1
Queuing Penalty (veh)	0	0	4	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✣	↱	Y	↱
Traffic Volume (vph)	708	875	697	490	382	11	267	24	51
Future Volume (vph)	708	875	697	490	382	11	267	24	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	3123	5644	5588	1457		1731	1731	1748	1900
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	3123	5644	5588	1457		1731	1731	1748	1900
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	708	875	697	490	382	11	267	24	51
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	708	875	697	490	0	420	240	39	36
Confl. Peds. (#/hr)	12			12					
Confl. Bikes (#/hr)				5					
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%
Turn Type	Prot	NA	NA	custom	Split	NA	Prot	Prot	Prot
Protected Phases	1!	6	2	1 7 8!	8	8!	8	7	7!
Permitted Phases									
Actuated Green, G (s)	22.1	44.8	18.7	59.2		23.1	23.1	6.0	6.0
Effective Green, g (s)	20.1	42.8	16.7	57.2		21.1	21.1	4.0	4.0
Actuated g/C Ratio	0.23	0.50	0.19	0.67		0.25	0.25	0.05	0.05
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	730	2812	1086	970		425	425	81	88
v/s Ratio Prot	c0.23	0.16	c0.12	c0.34		c0.24	0.14	0.02	0.02
v/s Ratio Perm									
v/c Ratio	0.97	0.31	0.64	0.51		0.99	0.56	0.48	0.41
Uniform Delay, d1	32.6	12.8	31.8	7.2		32.3	28.4	39.9	39.8
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	25.7	0.1	1.3	0.4		40.1	1.7	4.5	3.1
Delay (s)	58.3	12.9	33.2	7.6		72.4	30.1	44.4	42.9
Level of Service	E	B	C	A		E	C	D	D
Approach Delay (s)		33.2	22.6			57.0		43.7	
Approach LOS		C	C			E		D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	24.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	B19	B19	NB
Directions Served	L	L	T	T	T	T	T	T	R	T	T	LTR
Maximum Queue (ft)	264	276	280	257	251	125	200	167	248	40	82	246
Average Queue (ft)	167	163	165	149	141	33	79	52	102	1	5	154
95th Queue (ft)	253	262	250	240	233	89	171	125	243	32	38	224
Link Distance (ft)	346	346	346	346	346	176	176	176	176	591	591	436
Upstream Blk Time (%)			0			0	1	0	4			
Queuing Penalty (veh)			0			0	3	0	10			
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	NB	NW	NW
Directions Served	R	LR	R
Maximum Queue (ft)	191	91	78
Average Queue (ft)	97	66	41
95th Queue (ft)	171	89	77
Link Distance (ft)	436	69	69
Upstream Blk Time (%)		30	5
Queuing Penalty (veh)		15	2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	534	1697	549	451	146	2	294	48	126
Future Volume (vph)	534	1697	549	451	146	2	294	48	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	3123	5644	5588	1457		1731	1731	1748	1900
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	3123	5644	5588	1457		1731	1731	1748	1900
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	534	1697	549	451	146	2	294	48	126
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	534	1697	549	451	0	230	212	90	84
Confl. Peds. (#/hr)	8			8					
Confl. Bikes (#/hr)				9					
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%
Turn Type	Prot	NA	NA	custom	Split	NA	Prot	Prot	Prot
Protected Phases	1!	6	2	1 7 8!	8	8!	8	7	7!
Permitted Phases									
Actuated Green, G (s)	16.4	38.0	17.6	46.9		16.3	16.3	6.2	6.2
Effective Green, g (s)	14.4	36.0	15.6	44.9		14.3	14.3	4.2	4.2
Actuated g/C Ratio	0.20	0.50	0.22	0.62		0.20	0.20	0.06	0.06
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	620	2802	1202	902		341	341	101	110
v/s Ratio Prot	c0.17	c0.30	0.10	c0.31		0.13	0.12	0.05	0.04
v/s Ratio Perm									
v/c Ratio	0.86	0.61	0.46	0.50		0.67	0.62	0.89	0.76
Uniform Delay, d1	28.1	13.1	24.8	7.6		26.9	26.6	33.9	33.7
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	11.8	0.4	0.3	0.4		5.2	3.5	56.0	26.4
Delay (s)	39.9	13.5	25.0	8.0		32.1	30.1	90.0	60.1
Level of Service	D	B	C	A		C	C	F	E
Approach Delay (s)		19.8	17.4			31.2		75.5	
Approach LOS		B	B			C		E	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

A4: Cumulative Conditions Synchro Outputs

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR	NWR2
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✣	↱	↖↑	↱	
Traffic Volume (vph)	904	1523	687	551	455	49	393	4	84	47
Future Volume (vph)	904	1523	687	551	455	49	393	4	84	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.98		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Satd. Flow (prot)	3123	5644	5588	1433		1731	1731	1748	1900	
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Satd. Flow (perm)	3123	5644	5588	1433		1731	1731	1748	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	904	1523	687	551	455	49	393	4	84	47
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	64	0
Lane Group Flow (vph)	904	1523	687	551	0	543	354	68	3	0
Confl. Peds. (#/hr)	12			12						
Confl. Bikes (#/hr)				4						
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%	0%
Turn Type	Prot	NA	NA	Free	Split	NA	Perm	Prot	Prot	
Protected Phases	7	4	8		2	2		1	1	
Permitted Phases				Free			2			
Actuated Green, G (s)	29.0	48.0	15.0	100.0		34.0	34.0	6.0	6.0	
Effective Green, g (s)	27.0	46.0	13.0	100.0		32.0	32.0	4.0	4.0	
Actuated g/C Ratio	0.27	0.46	0.13	1.00		0.32	0.32	0.04	0.04	
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	843	2596	726	1433		553	553	69	76	
v/s Ratio Prot	c0.29	0.27	c0.12			c0.31		c0.04	0.00	
v/s Ratio Perm				0.38			0.20			
v/c Ratio	1.07	0.59	0.95	0.38		0.98	0.64	0.99	0.04	
Uniform Delay, d1	36.5	20.0	43.2	0.0		33.7	29.1	48.0	46.1	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	52.3	0.3	21.1	0.8		33.5	2.5	102.6	0.2	
Delay (s)	88.8	20.3	64.2	0.8		67.2	31.6	150.6	46.3	
Level of Service	F	C	E	A		E	C	F	D	
Approach Delay (s)		45.8	36.0			53.1		98.8		
Approach LOS		D	D			D		F		

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	122.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

	↗	→	←	↖	↖	↑	↗	↖	↖
Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✥	↱	Y	↱
Traffic Volume (vph)	567	1572	779	580	200	4	234	11	9
Future Volume (vph)	567	1572	779	580	200	4	234	11	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0		7.0	7.0	7.0	7.0
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	3123	5644	5588	1434		1731	1731	1748	1900
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	3123	5644	5588	1434		1731	1731	1748	1900
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	567	1572	779	580	200	4	234	11	9
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	567	1572	779	580	0	230	208	12	8
Confl. Peds. (#/hr)	6			6					
Confl. Bikes (#/hr)				7					
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%
Turn Type	Prot	NA	NA	Free	Split	NA	Perm	Prot	Prot
Protected Phases	7	4	8		2	2		1	1
Permitted Phases				Free			2		
Actuated Green, G (s)	22.1	47.8	20.7	84.0		18.3	18.3	2.9	2.9
Effective Green, g (s)	20.1	45.8	18.7	84.0		16.3	16.3	0.9	0.9
Actuated g/C Ratio	0.24	0.55	0.22	1.00		0.19	0.19	0.01	0.01
Clearance Time (s)	5.0	5.0	5.0			5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	747	3077	1243	1434		335	335	18	20
v/s Ratio Prot	c0.18	0.28	c0.14			c0.13		0.01	0.00
v/s Ratio Perm				c0.40			0.12		
v/c Ratio	0.76	0.51	0.63	0.40		0.69	0.62	0.67	0.40
Uniform Delay, d1	29.7	12.0	29.5	0.0		31.5	31.0	41.4	41.3
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	4.4	0.1	1.0	0.8		5.7	3.6	66.1	12.6
Delay (s)	34.1	12.2	30.5	0.8		37.2	34.6	107.5	53.9
Level of Service	C	B	C	A		D	C	F	D
Approach Delay (s)		18.0	17.8			36.0		86.0	
Approach LOS		B	B			D		F	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

A5: Cumulative Plus Westport and Signal Conditions Synchro Outputs

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	B19	B19	B19
Directions Served	L	L	T	T	T	T	T	T	R	T	T	T
Maximum Queue (ft)	361	359	354	369	363	207	234	224	242	118	23	107
Average Queue (ft)	320	322	217	227	227	88	141	116	104	8	1	7
95th Queue (ft)	426	417	358	385	390	178	229	208	246	55	15	51
Link Distance (ft)	346	346	346	346	346	166	166	166	166	591	591	591
Upstream Blk Time (%)	19	18	0	1	2	3	9	4	4			
Queuing Penalty (veh)	104	97	2	7	12	9	27	11	14			
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	NB	NB	B27	NW	NW
Directions Served	LTR	R	T	LR	R>
Maximum Queue (ft)	521	433	594	66	77
Average Queue (ft)	505	234	543	42	55
95th Queue (ft)	518	419	694	73	85
Link Distance (ft)	436	436	559	58	58
Upstream Blk Time (%)	66	0	57	11	25
Queuing Penalty (veh)	0	0	0	6	13
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR	NWR2
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✥	↱	Y	↱	
Traffic Volume (vph)	904	1529	703	575	455	49	395	4	84	47
Future Volume (vph)	904	1529	703	575	455	49	395	4	84	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00	
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Satd. Flow (prot)	3123	5644	5588	1457		1731	1731	1748	1900	
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Satd. Flow (perm)	3123	5644	5588	1457		1731	1731	1748	1900	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	904	1529	703	575	455	49	395	4	84	47
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	904	1529	703	575	0	544	355	68	67	0
Confl. Peds. (#/hr)	12			12						
Confl. Bikes (#/hr)				5						
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%	0%
Turn Type	Prot	NA	NA	custom	Split	NA	Prot	Prot	Prot	
Protected Phases	1!	6	2	1 7 8!	8	8!	8	7	7!	
Permitted Phases										
Actuated Green, G (s)	40.1	68.9	24.8	98.2		43.1	43.1	7.0	7.0	
Effective Green, g (s)	38.1	66.9	22.8	96.2		41.1	41.1	5.0	5.0	
Actuated g/C Ratio	0.29	0.51	0.17	0.73		0.31	0.31	0.04	0.04	
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	908	2882	972	1069		543	543	66	72	
v/s Ratio Prot	c0.29	0.27	c0.13	0.39		c0.31	0.21	c0.04	0.04	
v/s Ratio Perm										
v/c Ratio	1.00	0.53	0.72	0.54		1.00	0.65	1.03	0.93	
Uniform Delay, d1	46.4	21.5	51.1	7.6		45.0	38.8	63.0	62.8	
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	28.6	0.2	2.7	0.5		39.1	2.8	119.5	82.0	
Delay (s)	75.0	21.7	53.8	8.2		84.0	41.6	182.5	144.9	
Level of Service	E	C	D	A		F	D	F	F	
Approach Delay (s)		41.5	33.3			67.3		163.8		
Approach LOS		D	C			E		F		

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	123.9%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	B19	B19	B19
Directions Served	L	L	T	T	T	T	T	T	R	T	T	T
Maximum Queue (ft)	334	331	299	308	292	228	204	209	265	39	8	188
Average Queue (ft)	197	205	159	142	140	85	93	81	155	1	0	20
95th Queue (ft)	312	321	278	264	257	174	182	170	284	19	6	100
Link Distance (ft)	346	346	346	346	346	176	176	176	176	591	591	591
Upstream Blk Time (%)	0	0	0	0	0	1	1	1	8			
Queuing Penalty (veh)	2	1	0	0	0	3	5	3	30			
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: NORTHBOUND SR 85 RAMPS & DE ANZA COLLEGE DWY & STEVENS CREEK BLVD

Movement	NB	NB	B27	NW	NW
Directions Served	LTR	R	T	LR	R
Maximum Queue (ft)	336	243	96	61	41
Average Queue (ft)	178	91	12	20	3
95th Queue (ft)	318	195	121	55	21
Link Distance (ft)	436	436	559	69	69
Upstream Blk Time (%)	3		0	0	0
Queuing Penalty (veh)	0		0	0	0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NWL	NWR
Lane Configurations	↰↰	↑↑↑	↑↑↑	↱		✥	↱	↰↱	↱
Traffic Volume (vph)	567	1589	781	584	200	4	239	11	9
Future Volume (vph)	567	1589	781	584	200	4	239	11	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	*0.83	*1.00	*1.00	*0.92		*0.92	*0.92	*0.92	*1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85		1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (prot)	3123	5644	5588	1457		1731	1731	1748	1900
Flt Permitted	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Satd. Flow (perm)	3123	5644	5588	1457		1731	1731	1748	1900
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	567	1589	781	584	200	4	239	11	9
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	567	1589	781	584	0	233	210	12	8
Confl. Peds. (#/hr)	8			8					
Confl. Bikes (#/hr)				9					
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	1%	0%	0%
Turn Type	Prot	NA	NA	custom	Split	NA	Prot	Prot	Prot
Protected Phases	1!	6	2	1 7 8!	8	8!	8	7	7!
Permitted Phases									
Actuated Green, G (s)	16.2	39.4	19.2	48.9		18.6	18.6	6.1	6.1
Effective Green, g (s)	14.2	37.4	17.2	46.9		16.6	16.6	4.1	4.1
Actuated g/C Ratio	0.19	0.49	0.23	0.62		0.22	0.22	0.05	0.05
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	582	2773	1262	897		377	377	94	102
v/s Ratio Prot	c0.18	c0.28	0.14	c0.40		0.13	0.12	0.01	0.00
v/s Ratio Perm									
v/c Ratio	0.97	0.57	0.62	0.65		0.62	0.56	0.13	0.08
Uniform Delay, d1	30.8	13.7	26.5	9.4		26.9	26.5	34.3	34.2
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	30.6	0.3	0.9	1.7		3.0	1.8	0.6	0.3
Delay (s)	61.4	14.0	27.4	11.1		29.9	28.3	34.9	34.5
Level of Service	E	B	C	B		C	C	C	C
Approach Delay (s)		26.4	20.4			29.1		34.8	
Approach LOS		C	C			C		C	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

A6: Westport Trip Generation

Table 1
Project

TRIP GENERATION - WESTPORT

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR				PM PEAK HOUR			
				Daily Trips	Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Multifamily Housing (Low Rise)	220	-	Dwelling Unit(s)	7.32	0.46	23%	/	77%	0.56	63%	/	37%
Multifamily Housing (Mid-Rise)	221	-	Dwelling Unit(s)	5.44	0.36	26%	/	74%	0.44	61%	/	39%
Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35%	/	65%	0.26	55%	/	45%
Shopping Center	820	-	1,000 Sq Ft GLA	37.75	0.94	62%	/	38%	3.81	48%	/	52%
Existing Conditions												
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42	/	25	271	130	/	141
Shopping Center (85% Occupancy)[1]	820	60.566	1,000 Sq Ft GLA	2287	57	36	/	21	230	110	/	120
Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(78)	0	0	/	0	(78)	(37)	/	(41)
TOAL EXISTING TRIP CREDIT				**2209**	**57**	**36**	**/**	**21**	**152**	**73**	**/**	**79**
Proposed Conditions												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	646	40	9	/	31	49	31	/	18
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	626	41	11	/	30	51	31	/	20
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	146	8	3	/	5	10	6	/	4
Shopping Center	820	20.000	1,000 Sq Ft GLA	756	19	12	/	7	76	36	/	40
Gross Trips Generated before Internal Capture				2,174	108	35	/	73	186	104	/	82
Internal Capture Trips												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(44)	(1)	0	/	(1)	(6)	(4)	/	(2)
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	(42)	0	0	/	0	(7)	(5)	/	(2)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(10)	0	0	/	0	(1)	(1)	/	0
Shopping Center	820	20.000	1,000 Sq Ft GLA	(90)	(1)	(1)	/	0	(14)	(4)	/	(10)
Internal Capture Reduction				(186)	(2)	(1)	/	(1)	(28)	(14)	/	(14)
Trip Reductions due to Internal Capture[5]				9%	2%	3%	/	1%	15%	13%	/	17%
Additional Project Trip Reductions												
VTA Major Bus Stop (Daily, AM, PM = 2%) [2]				(28)	(2)	(1)	/	(1)	(2)	(1)	/	(1)
Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(26)	0	0		0	(26)	(12)	/	(14)
Project Trips				**1,934**	**104**	**33**	**/**	**71**	**130**	**77**	**/**	**53**
Existing Trip Credit				**(2209)**	**(57)**	**(36)**	**/**	**(21)**	**(152)**	**(73)**	**/**	**(79)**
Total Project Trips				**1934**	**104**	**33**	**/**	**71**	**130**	**77**	**/**	**53**
Net New Project Trips				**(275)**	**47**	**(3)**	**/**	**50**	**(22)**	**4**	**/**	**(26)**

Notes:

1. Assume current retail is 85% occupied
2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook.
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

April 7, 2020

State Clearinghouse Number 2019070377 | THE WESTPORT MIXED-USE PROJECT

RESPONSE TO COMMENTS DOCUMENT

for the City of Cupertino

CITY OF CUPERTINO EST. 1955

PLACEWORKS

PLACEWORKS

CITY OF CUPERTINO

April 7, 2020

State Clearinghouse Number 2019070377 | THE WESTPORT MIXED-USE PROJECT

RESPONSE TO COMMENTS DOCUMENT

for the City of Cupertino

PLACEWORKS

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LIST OF TABLES

1. Introduction

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This Response to Comment document, which has been prepared in compliance with the California Environmental Quality Act (CEQA)[1] and the CEQA Guidelines,[2] provides responses to comments received on the Draft Environmental Impact Report (Draft EIR) for The Westport Mixed-Use Project, referred herein to as "proposed project." The Draft EIR identifies significant effects on the environment (impacts) associated with the proposed project, identifies alternatives to the proposed project and identifies mitigation measures to avoid or reduce potential environmental impacts. This document also contains text revisions to the Draft EIR. This document together with the Draft EIR constitute the Final EIR for the proposed project.

1.2 ENVIRONMENTAL REVIEW PROCESS

According to CEQA, lead agencies are required to consult with public agencies having jurisdiction over a proposed project, and to provide the general public with an opportunity to comment on the Draft EIR. This Response to Comments document has been prepared to respond to comments received on the Draft EIR. A Notice of Preparation of an EIR was issued by the City on Thursday, July 11, 2019 for a 30-day-comment period. A Notice of Availability of the Draft EIR was issued on Wednesday, November 6, 2019, and the Draft EIR was made available for public review for a 46-day public review period through Friday, December 20, 2019. The Draft EIR was distributed to local, regional, and State agencies, and the general public was advised of the availability of the Draft EIR. Copies of the Draft EIR were made available for review at the City's website (www.cupertino.org/westport), at the Cupertino Library (10800 Torre Ave, Cupertino, CA 95014) and at Cupertino City Hall (10300 Torre Avenue, Cupertino, CA 95014) at the Community Development Department counter.

Written comments received on the Draft EIR are included in their original format as Appendix A, Comment Letters, of this Response to Comments document. The comments are also reproduced in Chapter 5, Comments and Responses, of this document, and responses to comments on environmental issues are provided.

The Final EIR will be presented at a Planning Commission hearing at which the Commission will advise the City Council on certification of the EIR. The Planning Commission will not take final action on the EIR or the proposed project but will provide its recommendations to the City Council. The City Council will then

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[1] The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000 to 21177.

[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 to15387.

consider the Planning Commission’s recommendations on the Final EIR and the proposed project during a noticed public hearing and will take final action regarding the Final EIR and the proposed project. The City Council is currently scheduled to consider certification of the Final EIR and approval of the proposed project at a public hearing in Spring 2020.

2. *Executive Summary*

This executive summary presents an overview of the proposed The Westport Mixed-Use Project, referred herein to as "proposed project," and the conclusions of the analysis contained in Chapters 4.1 through 4.9 of the Draft Environmental Impact Report (Draft EIR). This executive summary describes the organization of this document, provides a summary of the proposed project, and lists of each significant effect on the environment (impacts) with the proposed mitigation, if any, that corresponds with the environmental issues discussed in the Draft EIR (see Table 2-1). All information in Table 2-1 is a duplicate of that which was published in the Draft EIR except for Chapter 4.2, Air Quality, and Chapter 4.9, Utilities and Service Systems. The mitigation measures in these chapters have been revised pursuant to edits made in Chapter 3, Revisions to the Draft EIR, of this document.

2.1 DOCUMENT ORGANIZATION

This document is organized into the following chapters:

- **Chapter 1: Introduction**. This chapter discusses the use and environmental review process.
- **Chapter 2: Executive Summary.** This chapter is a summary of the proposed project and the findings of the Draft EIR and Response to Comments document.
- **Chapter 3: Revisions to the Draft EIR.** Additional corrections to the text and graphics of the Draft EIR are contained in this chapter. Underline text represents language that has been added to the EIR; text with ~~strikethrough~~ has been deleted from the EIR. These revisions do not contain "significant new information," as defined in the CEQA Guidelines Section 15088.5, which includes new or substantially more severe environmental impacts, new mitigation measures or alternatives, or information indicating that the Draft EIR is fundamentally or basically inadequate.
- **Chapter 4: List of Commenters**. Names of agencies and individuals who commented on the Draft EIR are included in this chapter.
- **Chapter 5: Comments and Responses.** This chapter lists the comments received from agencies and the public on the Draft EIR, and provides responses to those comments.
- **Chapter 6: Mitigation Monitoring or Reporting Program.** This chapter lists the mitigation measures included in the Draft EIR for the proposed project, and identifies programs for monitoring and reporting the progress on implementing these measures.

- **Appendix:** The appendix for this Response to Comment document (presented in PDF format on a CD attached to the back cover) contain the following supporting document:
  - Appendix A: Comment Letters

2.2 SUMMARY OF PROPOSED PROJECT

The 8.1-acre project site is identified as Priority Housing Element Site A3 (The Oaks Shopping Center) in the City of Cupertino General Plan (Community Vision 2015-2040). The site is currently developed with a one-story shopping center (The Oaks Shopping Center) consisting of five buildings occupied with retail stores, restaurants, and offices, which were built between 1973 and 1976. Existing development on the site consists of approximately 71,250 square feet of shopping center development. The project site also includes 201,831 square feet of paved area, which includes associated parking, sidewalks, patios, and driveways, in addition to 45,486 square feet of native and non-native landscaping.

Following approval by the Cupertino City Council, the proposed project would demolish the existing buildings and construct 18 new buildings, that would have 242 residential units and 20,000 square feet of retail space, as well as below and at-grade parking, and associated landscape and hardscape areas. The proposed residential component would consist of three rowhouse buildings, 13 townhouse buildings (attached homes), and two mixed-use (residential and retail) buildings, including market-rate units and senior housing. The proposed retail component would be located on the ground level of the two mixed-use residential buildings. Residential-Retail Building 1 would have 17,600 square feet of retail space located at the corner of Stevens Creek Boulevard and Mary Avenue. Residential-Retail Building 2 would have 2,400 square feet of retail space on the ground level fronting Stevens Creek Boulevard. The proposed project would include one access point off Stevens Creek Boulevard and three additional access points off Mary Avenue. The below-grade parking would be located under Retail-Residential Building 1 and accessed from the central access point on Mary Avenue. Off-site improvements include the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. The proposed project is described in more detail in Chapter 3, Project Description, of the Draft EIR.

2.3 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Table 2-1 summarizes the conclusions of the environmental analysis contained in the Draft EIR and presents a summary of impacts and mitigation measures. It is organized to correspond with the environmental issues discussed in Chapter 4.0 through 4.9 of the Draft EIR. The table is arranged in four columns: 1) impact statement; 2) significance prior to mitigation; 3) mitigation measures; and 4) significance after mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.9 of the Draft EIR. As shown in Table 2-1, some significant impacts would be reduced to a less-than-significant level if the mitigation measures recommended in the Draft EIR are implemented.

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
Air Quality			
AQ-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	N/A	N/A
AQ-2: Uncontrolled fugitive dust (PM_{10} and $PM_{2.5}$) could expose the areas that are downwind of construction sites to air pollution from construction activities without the implementation of BAAQMD's best management practices.	S	**Mitigation Measure AQ-2: BAAQMD Basic Construction Measures.** Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are: ▪ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ▪ All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ▪ All vehicle speeds on unpaved roads shall be limited to 15 mph. ▪ All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. ▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		be checked by a certified mechanic and determined to be running in proper condition prior to operation. ▪ Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. ▪ Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. ▪ All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.	
AQ-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	N/A	N/A
AQ-4: Implementation of the project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.	S	Implement Mitigation Measure AQ-2.	LTS
Biological Resources			
BIO-1: Tree removal and demolition activities during site clearance could destroy active nests, and/or otherwise interfere with nesting of birds protected under federal and State law.	S	**Mitigation Measure BIO-1:** Nests of raptors and other birds shall be protected when in active use, as required by the federal Migratory Bird Treaty Act and the California Fish and Game Code. The construction contractor shall indicate the following on all construction plans, if construction activities and any required tree removal occur during the breeding season (February 1 and August 31). Preconstruction surveys shall: ▪ Be conducted by a qualified biologist prior to tree removal or grading, demolition, or construction activities. Note that preconstruction surveys are not required for tree removal or construction, grading, or demolition activities outside the nesting period. ▪ Be conducted no more than 14 days prior to the start of tree removal or construction. ▪ Be repeated at 14-day intervals until construction has been initiated in the area after which surveys can be stopped.	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		▪ Document locations of active nests containing viable eggs or young birds. Protective measures for active nests containing viable eggs or young birds shall be implemented under the direction of the qualified biologist until the nests no longer contain eggs or young birds. Protective measures shall include: ▪ Establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest location as determined by the qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance and proximity to existing development. In general, exclusion zones shall be a minimum of 300 feet for raptors and 75 feet for passerines and other birds. ▪ Monitoring active nests within an exclusion zone on a weekly basis throughout the nesting season to identify signs of disturbance and confirm nesting status. ▪ An increase in the radius of an exclusion zone by the qualified biologist if project activities are determined to be adversely affecting the nesting birds. Exclusion zones may be reduced by the qualified biologist only in consultation with California Department of Fish and Wildlife. ▪ The protection measures shall remain in effect until the young have left the nest and are foraging independently or the nest is no longer active.	
BIO-2: Proposed development would result in removal of trees protected under City ordinance.	S	**Mitigation Measure BIO-2:** The proposed project shall comply with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18). A tree removal permit shall be obtained for the removal of any "protected tree," and replacement plantings shall be provided as approved by the City. If permitted, an appropriate in-lieu tree replacement fee may be paid to the City of Cupertino's Tree Fund as compensation for "protected trees" removed by the proposed project, where sufficient land area is not available on-site for adequate replacement and when approved by the City.	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		In addition, a Tree Protection and Replacement Program (Program) shall be developed by a Certified Arborist prior to project approval and implemented during project construction to provide for adequate protection and replacement of "protected trees," as defined by the City's Municipal Code. The Program shall include the following provisions: ▪ Adequate measures shall be defined to protect all trees to be preserved. These measures should include the establishment of a tree protection zone (TPZ) around each tree to be preserved, in which no disturbance is permitted. For design purposes, the TPZ shall be located at the dripline of the tree or 10 feet, whichever is greater. If necessary, the TPZ for construction-tolerant species (i.e., coast live oaks) may be reduced to 7 feet. ▪ Temporary construction fencing shall be installed at the perimeter of TPZs prior to demolition, grubbing, or grading. Fences shall be 6-foot chain link or equivalent, as approved by the City of Cupertino. Fences shall remain until all construction is completed. Fences shall not be relocated or removed without permission from the consulting arborist. ▪ No grading, excavation, or storage of materials shall be permitted within TPZs. Construction trailers, traffic, and storage areas shall remain outside fenced areas at all times. No excess soil, chemicals, debris, equipment, or other materials shall be dumped or stored within he TPZ. ▪ Underground services including utilities, sub-drains, water or sewer shall be routed around the TPZ. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury. Irrigation systems must be designed so that no trenching will occur within the TPZ. ▪ Construction activities associated with structures and underground features to be removed within the TPZ shall use the smallest equipment and operate from outside the TPZ. The consulting arborist	

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		shall be on-site during all operations within the TPZ to monitor demolition activity. ▪ All grading, improvement plans, and construction plans shall clearly indicate trees proposed to be removed, altered, or otherwise affected by development construction. The tree information on grading and development plans should indicate the number, size, species, assigned tree number, and location of the dripline of all trees that are to be retained/preserved. All plans shall also include tree preservation guidelines prepared by the consulting arborist. ▪ The demolition contractor shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection. Prior to beginning work, the contractor(s) working in the vicinity of trees to be preserved shall be required to meet with the consulting arborist at the site to review all work procedures, access routes, storage areas, and tree protection measures. ▪ All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved. Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the consulting arborist. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied. ▪ Any plan changes affecting trees shall be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans. ▪ Trees to be preserved may require pruning to provide construction clearance. All pruning shall be completed by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the 2002 Best Management Practices for Pruning published by the International Society of Arboriculture, and adhere to the most recent editions of the American National Standard for Tree Care Operations (Section Z133.1) and Pruning (Section A300).	

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		▪ Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the consulting arborist. ▪ Any demolition or excavation, such as grading, pad preparation, excavation, and trenching, within the dripline or other work that is expected to encounter tree roots should be approved and monitored by the consulting arborist. Any root pruning required for construction purposes shall receive prior approval of, and by supervised by, the consulting arborist. Roots shall be cut by manually digging a trench and cutting exposed roots with a sharp saw. ▪ Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Tree stumps shall be ground 12 inches below ground surface. ▪ All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Game Code Sections 3503 through 3513 to not disturb nesting birds. To the extent feasible, tree pruning, and removal shall be scheduled outside of the breeding season. Breeding bird surveys shall be conducted prior to tree work. Qualified biologists shall be involved in establishing work buffers for active nests. (see Mitigation Measure BIO-1) ▪ The vertical and horizontal locations of all the trees identified for preservation shall be established and plotted on all plans. These plans shall be forwards to the consulting arborist for review and comment. ▪ Foundations, footings, and pavements on expansive soils near trees shall be designed to withstand differential displacement to protect the soil surrounding the tree roots. ▪ Any liming within 50 feet of any tree shall be prohibited, as lime is toxic to tree roots. Any herbicides placed under paving materials shall be safe for use under trees and labeled for that use. ▪ Brush from pruning and trees removal operations shall be chipped and spread beneath the trees within the TPZ. Mulch shall be between	

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		2 inches and 4 inches in depth and kept at a minimum of 3 feet from the base of the trees. ▪ All recommendations for tree preservation made by the applicant's consulting arborist shall be followed.	
BIO-3: The proposed project in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to biological resources.	S	Implement Mitigation Measures BIO-1 and BIO-2.	LTS
Cultural and Tribal Cultural Resources			

CULT-1: Construction of the proposed project would have the potential to cause a significant impact to an unknown archaeological resource pursuant to CEQA Guidelines Section 15064.5.	S	**Mitigation Measure CULT-1:** If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing (including grading, demolition and/or construction) activities:
		▪ All work within 50 feet of the resources shall be halted, the City shall be notified, and a qualified archaeologist shall be consulted. The contractor shall cooperate in the recovery of the materials. Work may proceed on other parts of the project site while mitigation for tribal cultural resources, historical resources or unique archaeological resources is being carried out.
		▪ The qualified archaeologist shall prepare a report for the evaluation of the resource to the California Register of Historical Places and the City Building Department. The report shall also include appropriate recommendations regarding the significance of the find and appropriate mitigations as follows:
		  ▪ If the resource is a non-tribal resource, the archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5.
		  ▪ If the resource is a tribal resource – whether historic or prehistoric – the consulting archaeologist shall consult with the appropriate tribe(s) to evaluate the significance of the resource and to recommend appropriate and feasible avoidance, testing, preservation or mitigation measures, in light of factors such as the significance of the find, proposed project design, costs, and other considerations. If avoidance is infeasible,
			LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		other appropriate measures (e.g., data recovery) may be implemented. - All significant non-tribal cultural materials recovered shall be, as necessary, and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.	
CULT-2: The proposed project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: 1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.	LTS	N/A	N/A
CULT-3: Construction of the proposed project would have the potential to cause a significant impact to an unknown tribal cultural resource as defined in Public Resources Code 21074.	S	**Mitigation Measure CULT-3:** Implement Mitigation Measure CULT-1.	LTS
CULT-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in cumulative impacts with respect to cultural resources.	S	Implement Mitigation Measure CULT-1	LTS
Geology and Soils			

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
GEO-1: Construction of the proposed project would have the potential to directly or indirectly affect an unknown unique paleontological resource.	S	**Mitigation Measure GEO-1:** The construction contractor shall incorporate the following in all grading, demolition, and construction plans: ▪ In the event that fossils or fossil-bearing deposits are discovered during grading, demolition, or building, excavations within 50 feet of the find shall be temporarily halted or diverted. ▪ The contractor shall notify the City of Cupertino Building Department and a City-approved qualified paleontologist to examine the discovery. ▪ The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. ▪ The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. ▪ If the project applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project based on the qualities that make the resource important. The excavation plan shall be submitted to the City for review and approval prior to implementation.	LTS
GEO-2: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.	S	Implement Mitigation Measure GEO-1.	LTS
Greenhouse Gas Emissions			
GHG-1: The proposed project would not directly or indirectly generate GHG emissions that may have a significant impact on the environment.	LTS	N/A	N/A
GHG-2: The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	LTS	N/A	N/A

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
GHG-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to GHG emissions.	LTS	N/A	N/A
Hazards and Hazardous Materials			
HAZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials during construction.	LTS		N/A
HAZ-2: The proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	LTS	N/A	N/A
HAZ-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to hazards and hazardous materials.	LTS	N/A	N/A
Noise			
NOISE-1: The proposed project could generate a substantial temporary increase in ambient noise levels in the vicinity of the proposed project during the construction phase that could exceed the standards established in the local noise ordinance.	LTS	**Mitigation Measure NOISE-1:** Prior to Grading Permit issuance or the start of demolition activities, the project applicant shall demonstrate, to the satisfaction of the City of Cupertino Public Works Director and/or Community Development Director, that the proposed project complies with the following: ▪ Pursuant to Cupertino Municipal Code (CMC) Section 10.48.053 the construction activities shall be limited to daytime hours as defined in CMC Section 10.48.010 (i.e., daytime hours are from 7:00 a.m. to 8:00 p.m. on weekdays). ▪ At least 90 days prior to the start of construction activities, all offsite businesses and residents within 300 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the proposed project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification should include the telephone numbers of the City's and contractor's authorized	N/A

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		representatives that are assigned to respond in the event of a noise or vibration complaint. ▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, which includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City. ▪ During the entire active construction period, equipment and trucks used for project construction will utilize the best available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. ▪ During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible. ▪ Haul routes shall be selected to avoid the greatest amount of sensitive use areas. ▪ Signs will be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment will be turned off if not in use for more than 5 minutes. ▪ During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only. The construction manager will use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.	

EXECUTIVE SUMMARY

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
NOISE-2: The proposed project would not generate excessive groundborne noise levels.	LTS	N/A	N/A
NOISE-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to noise.	S	Implement Mitigation Measure NOISE-1.	LTS
Transportation and Circulation			
TRANS-1: The proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	LTS	N/A	N/A
TRANS-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	LTS	N/A	N/A
TRANS-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in additional cumulatively considerable impacts.	LTS	N/A	N/A
Utilities and Service Systems			
UTIL-1: Implementation of the proposed project may result in a determination by the wastewater treatment provider, which serves or may serve the proposed project, that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	S	**Mitigation Measure UTIL-1:** No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods: 1) Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or 2) Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD.	LTS

TABLE 2-2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact Statement	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the CSD in the *Flow Modeling Analysis for the Homestead Flume Outfall to the City of Santa Clara*, prepared by Mark Thomas & Co. Inc., dated December 6, 2019, unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD. To calculate the peak wet weather flow for a 10-year storm event, the average daily flow rate shall be multiplied by a factor of 2.95 as required by CSD pursuant to their December 2019 flow modeling analysis. If the prior agreement between CSD and the City of Santa Clara that currently limits the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system were to be updated to increase the permitted peak wet weather flow sufficiently to accommodate, this would also change the impacts of the project to less than significant. If this were to occur prior to the City's approval of building permits, then Mitigation Measure UTIL-1 would no longer be required to be implemented.	
UTIL-2: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to wastewater treatment.	S	Implement Mitigation Measure UTIL-1	LTS

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3. Revisions to the Draft EIR

This chapter contains text revisions to the Draft EIR that were made in response comments from agencies, organizations and the public, as well as staff-directed changes. These text revisions include typographical corrections, insignificant modifications, amplifications and clarifications of the Draft EIR. The following revisions also include analysis of an alternative to the proposed project that was submitted by the applicant on March 19, 2020 for consideration by the City. In each case where a revision has been made, the revised page and location on the page is presented, followed by the textual, tabular, or graphical revision. Underlined text represents language that has been added to the EIR; text with ~~strikethrough~~ represents language that has been deleted from the Draft EIR. None of the revisions to the Draft EIR constitutes significant new information as defined in CEQA Guidelines Section 15088.5; therefore, the Draft EIR does not need to be recirculated.

CHAPTER 2, EXECUTIVE SUMMARY

The text in Table 2-2, Summary of Impacts and Mitigation Measures, on page 2-15 of the Draft EIR is hereby amended as follows:

Mitigation Measure AQ-2: BAAQMD Basic Construction Measures. Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.
- Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

The text in Table 2-2, Summary of Impacts and Mitigation Measures, on page 2-19 of the Draft EIR is hereby amended as follows:

Mitigation Measure UTIL-1: No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods:

1. Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or
2. Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD.

The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the ~~*San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient* table in the May 2007, *City of Santa Clara Sanitary Sewer Capacity Assessment*,[19] and *California Green Building Standards*,~~ CSD in the *Flow Modeling Analysis for the Homestead Flume Outfall to the City of Santa Clara,* prepared by Mark Thomas & Co. Inc., dated December 6, 2019. unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD. To calculate the peak wet weather flow for a 10-year storm event, the average daily flow rate shall be multiplied by a factor of 2.95 as required by CSD pursuant to their December 2019 flow modeling analysis.

Footnote:

~~[19] Mark Thomas and Associates, July 19, 2018, Email communication with Cupertino Public Works.~~

CHAPTER 3, PROJECT DESCRIPTION

The text in Section 3.4.1.8 Utilities and Service Connections, starting on the fifth sentence of the second paragraph on page 3-22 of the Draft EIR is hereby amended as follows:

The existing CSD peak wet weather flow into the Santa Clara system is modeled at ~~13.29~~13.14 mgd.[32] Based on the ~~2007 *City of Santa Clara Sewer Capacity Assessment*~~ CSD's *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019, the estimated ~~wastewater~~ average dry weather flow (ADWF) generation rate for multi-family residential uses is 133 gallons per day (gpd) per unit, 55 gpd per person per townhome (or rowhouse), and 0.073 gpd per square foot of retail space. The proposed 242 residential units are comprised of 154 multi-family units and 88 townhomes. Based on an average household size of 2.87 persons,[33] the townhomes would generate 253 new residents. The proposed project also includes 20,000 square feet of retail space. Applying ~~this~~ these generation rates, the proposed ~~242 residential units and 20,000 square feet of retail space would generate up to 38,186 gpd or approximately 0.0382 mgpd of wastewater~~ project would generate approximately 35,833 gpd or 0.036 mgd of ADWF. The approximately 71,250 square-foot shopping center is currently 85 percent occupied (or 60,560 square feet). The shopping center currently, generates an ADWF of about ~~21,376~~4,421 gpd or ~~0.0213~~ 0.004 mgd. Therefore, the net increase in ADWF for the proposed project is ~~16,810~~31,412 gpd or ~~0.016~~ 0.031 mgd.[34] According to Benjamin T. Porter, Cupertino Sanitary District Manager-Engineer, in a letter to the City of Cupertino dated December 18, 2019, the peak wet weather flow is calculated by multiplying the average dry flow by a factor of 2.95. The peak wet weather flow for the proposed project is 105,707 gpd or 0.105 mgd. The operational shopping center currently generates about 13,042 gpd or 0.0013 mgd of peak wet weather flow. Therefore, the net increase in peak wet weather flow for the proposed project is 92,665 gpd or 0.093 mgd.

Footnotes:

[32] Mark Thomas & Co. Inc., Cupertino Sanitary District, December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara*~~, February 20, 2019.~~

[33] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 projections of the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino.

[34] ~~38,186~~ 35,833 gpd proposed generation – ~~21,376~~ 4,421 gpd existing generation = ~~16,810~~ 31,412 gpd (or ~~0.0168~~ 0.031 mgd) net increase.

The text in Section 3.4.4, Required Permits and Approvals, on page 3-28 of the Draft EIR is hereby amended as follows:

Encroachment permits from the City and Caltrans would also be required as well as design review and approval for the proposed bus stop by the VTA. Additionally, Caltrans would require a Maintenance

Agreement for any proposed landscaping installed in the Caltrans right of way (ROW) and any trees in the Caltrans ROW would require prior approval from the Caltrans District Landscape Architect.

CHAPTER 4.1, AIR QUALITY

Mitigation Measure AQ-2 under Section 4.1, Air Quality, on pages 4.1-18 and 4.1-19 of the Draft EIR is hereby amended as follows:

Mitigation Measure AQ-2: BAAQMD Basic Construction Measures. Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.
- Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

CHAPTER 4.5, GREENHOUSE GAS EMISSIONS

The text in Section 4.5, Greenhouse Gas Emissions, on pages 4.5-18 and 4.5-19 of the Draft EIR is hereby amended as follows:

As discussed in Section 4.5.1.2, Regulatory Framework, the Cupertino CAP identifies sources of GHG emissions within the city's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic goals, measures, and actions to reduce emissions. Furthermore, as described in Section 4.5.1.2, the Cupertino CAP is a qualified GHG reduction program. ~~The proposed project would be consistent with the overall goals of the Cupertino CAP, which is the City's strategic planning document to reduce GHG emissions. As an infill project on a currently developed site within a designated PDA and TPA (CAP Measure C-T-6, Transit-Oriented Development), the proposed project would support efforts to reduce GHG emissions from VMT (CAP Goal 1, Reduce Energy Use). Consistent with CAP Measure C-T-1, Bicycle & Pedestrian Environment Enhancements, the proposed project would implement the City's 2016~~ ~~*Bicycle Transportation Plan*~~ ~~and install a Class IV separated bikeway on Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp, and a signal control for the westbound right turn movement to improve bike and pedestrian safety, thus, promoting these alternative modes of transportation. The proposed new buildings would achieve the current Building Energy Efficiency Standards and would be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems that would improve energy efficiency. The proposed buildings would comply with Title 24 solar requirements and would meet solar ready standards. While the requirements under Title 24 do not require installation of solar-energy systems, buildings are required to be built to accept the installation of such a system. CAP Measures C-E-5, Community-wide Solar Photovoltaic Development, also encourages voluntary community-wide solar photovoltaic development. Additionally, pursuant to CMC Chapter 16.58 (Green Building Ordinance), the proposed project would be required to build to LEED or an alternative reference standard (CAP Goal 1, Reduce Energy Use) and install Electric Vehicle Supply Equipment for the charging of electric vehicles (CAP Measure C-T-7, Community-Wide Alternative Fuel Vehicles). Consistent with CAP Measure C-W-1, SB-X7-7, the proposed project would comply with SB X7-7, which requires California to achieve a 20 percent reduction in urban per capita water use by 2020. The proposed project would implement best management practices for water conservation to achieve the City's water conservation goals. Water conservation would indirectly contribute to reducing GHG emissions. If less water is used, fewer resources (namely energy) will be used to source, distribute, and treat the water. Since energy consumption leads to the generation of GHG emissions, using fewer resources would help to reduce GHG emissions overall. Furthermore, consistent with CAP Measure C-SW-3, Construction and Demolition Waste Diversion Program, the proposed project would comply with the City's Construction and Demolition Debris Diversion Ordinance, which requires applicable construction projects to divert 60 percent of construction waste. Prior to receiving a final building inspection, a construction recycling report would be submitted to show the tons recycled and disposed by material type. As an infill redevelopment priority housing development on a designated PDA and TPA the proposed project would be consistent with the overall intent of the CAP to support reductions in GHG emissions and the proposed project would not conflict any goals or measures to reduce GHG emissions in the CAP and impacts would be~~ ~~*less than significant*.~~ Consistency of the proposed project to the Cupertino CAP is described in Table 4.5-7. As shown in the table, the proposed project would be consistent with the overall intent of the CAP to support reductions in GHG emissions. Therefore, the proposed project would not conflict any goals or measures to reduce GHG emissions in the CAP and impacts would be *less than significant*.

Table 4.5-7 City of Cupertino Climate Action Plan Consistency Analysis

Goal	Project Consistency
Community-Wide Measures	
Measure C-E-1 Energy Use Data and Analysis *Increase resident and building owner/tenant/operator knowledge about how, when, and where building energy is used.* *2035 GHG Reduction Potential: 850 MT* CO_2*e/yr*	**Consistent.** The City is the responsible party for this measure. This measure is not relevant because the proposed project receives energy through Silicon Valley Clean Energy (SVCE) and therefore utilizes renewable energy for the building. Additionally, the project includes solar PV cells and other energy efficiency design features, pursuant to the 2019 Building Energy Efficiency Standards and CALGreen. The proposed project would not conflict with implementation of this measure.
Measure C-E-2 Retrofit Financing ***Promote*** *existing and support development of new private financing options for home and commercial building retrofits and renewable energy development.* *2035 GHG Reduction Potential: 10,525 MT* CO_2*e/yr*	**Consistent.** The City is the responsible party for this measure. The project proposes new buildings that would comply with the 2019 Building Energy Efficiency Standards and CALGreen, at minimum, in addition to being designed to achieve either a LEED Silver rating or a Green Point Rating (GPR) of 50 points pursuant to CMC Chapter 16.58, Section 16.58.220, Table 101.10, as stated on pages 3-26 and 3-27 of Chapter 3, Project Description. The proposed project would not conflict with implementation of this measure.
Measure C-E-3 Home & Commercial Building Retrofit Outreach ***Develop*** *aggressive outreach program to drive voluntary participation in energy- and water-efficiency retrofits.* *Supporting Measure*	**Consistent.** The City is the responsible party for this measure. The proposed project consists of construction of new buildings and is not a retrofit project. Additionally, the proposed project would comply with the latest building code and utilize energy and water efficient fixtures. The proposed project would not conflict with implementation of this measure.
Measure C-E-4 Energy Assurance Plan *Develop a long-term community-wide energy conservation plan that considers future opportunities to influence building energy efficiency through additional or enhanced building regulations.* *Supporting Measure*	**Consistent.** The City is the responsible party for this measure. The proposed project includes buildings that would comply with the 2019 Building Energy Efficiency Standards and CALGreen, at minimum, in addition to being designed to achieve either a LEED Silver rating or a Green Point Rating (GPR) of 50 points pursuant to CMC Chapter 16.58, Section 16.58.220, Table 101.10, as stated on pages 3-26 and 3-27 of Chapter 3, Project Description.
Measure C-E-5 Community-Wide Solar Photovoltaic Development *Encourage voluntary community-wide solar photovoltaic development through regulatory barrier reduction and public outreach campaigns.* *2035 GHG Reduction Potential: 4,400 MT* CO_2*e/yr*	**Consistent.** The City is the responsible party for this measure. The proposed project would not conflict with implementation of this measure. The project includes PV cells for on-site electricity production, pursuant to the 2019 Building Energy Efficiency Standards and CALGreen.

Table 4.5-7 City of Cupertino Climate Action Plan Consistency Analysis

Goal	Project Consistency
Measure C-E-6 Community-Wide Solar Hot Water Development *Encourage communitywide solar hot water development through regulatory barrier reduction and public outreach campaigns.* *2035 GHG Reduction Potential: 925 MT CO_2e/yr*	**Consistent.** The City is the responsible party for this measure. The proposed project would not conflict with implementation of this measure.
Measure C-E-7 Community Choice Energy Option ***Partner** with other Santa Clara County jurisdictions to evaluate the development of a regional CCE option, including identification of the geographic scope, potential costs to participating jurisdictions and residents, and potential liabilities.* *2035 GHG Reduction Potential: 56,875 MT CO_2e/yr*	**Consistent.** The City is the responsible party for this measure. The City of Cupertino is a member of Silicon Valley Clean Energy (SVCE) which partners with PG&E to provide clean electricity. The proposed project would receive energy from SVCE. The proposed project would not conflict with implementation of this measure.
Measure C-T-1 Bicycle & Pedestrian Environment Enhancements ***Continue to** encourage multi-modal transportation, including walking and biking, through safety and comfort enhancements in the bicycle and pedestrian environment.* *Supporting Measure*	**Consistent.** The City is the responsible party for this measure. The proposed project would implement the City's 2016 Bicycle Transportation Plan and install a Class IV separated bikeway on Stevens Creek Boulevard between Mary Avenue and the northbound SR-85 on-ramp, and a signal control for the westbound right turn movement to improve bike and pedestrian safety, therefore promoting these alternative modes of transportation.
Measure C-T-2 Bikeshare Program ***Explore feasibility of** developing local bikeshare program.* *Supporting Measure*	**Consistent.** The City is the responsible party for this measure. The proposed project would not conflict with implementation of this measure. The proposed project includes 117 short and long-term bicycle parking for both visitors and residents consisting of five Class 1 facilities for retail uses, 18 Class 2 facilities for retail uses, 78 Class 1 facilities for residential uses, and 16 Class 2 facilities for residential uses. Bike facilities would be located adjacent to Buildings 1 and 2, in addition to within the proposed buildings.
Measure C-T-3 Transportation Demand Management *Provide informational resources to local businesses subject to SB 1339 transportation demand management program requirements and encourage additional voluntary participation in the program.* *2035 GHG Reduction Potential: 2,375 MT CO_2e/yr*	**Consistent.** The City is the responsible party for this measure. The proposed project would not conflict with or obstruct the City's ability to implement this measure.

Table 4.5-7 City of Cupertino Climate Action Plan Consistency Analysis

Goal	Project Consistency
Measure C-T-4 Transit Route Expansion *Explore options to develop local community shuttle or community-wide car sharing to fill gaps in existing transit network.* *Supporting Measure*	Consistent. The City is the responsible party for this measure. The proposed project would not conflict with implementation of this measure.
Measure C-T-5 Transit Priority *Improve transit service reliability and speed.* *Supporting Measure*	Consistent. The City is the responsible party for this measure. The proposed project would install a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp in coordination with the VTA and City of Cupertino Public Works Department. The proposed project would not conflict with implementation of this measure.
Measure C-T-6 Transit-Oriented Development *Continue to encourage development that takes advantage of its location near local transit options (e.g., major bus stops) through higher densities and intensities to increase ridership potential.* *Supporting Measure*	Consistent. The City is the responsible party for this measure. As described in Chapter 3, Project Description, on page 3-9, the proposed project is an infill, high-density mixed-use project near transit stations. As an infill project on a currently developed site within a designated PDA and TPA, the proposed project would support efforts to reduce GHG emissions from VMT (CAP Goal 1, Reduce Energy Use). The proposed project would not conflict with implementation of this measure.
Measure C-T-7 Community-Wide Alternative Fuel Vehicles *Encourage community-wide use of alternative fuel vehicles through expansion of alternative vehicle refueling infrastructure.* *2035 GHG Reduction Potential: 10,225 MT CO_2e/yr*	Consistent. The City is the responsible party for this measure. Pursuant to the City of Cupertino Municipal Code (CMC) Chapter 16.58, the proposed project would include 10 percent of the total number of multi-family parking spaces as EV spaces. The townhomes and rowhomes will have EV capabilities to install charging stations. The proposed project would not conflict with implementation of this measure.
Measure C-W-1 SB-X7-7 *Implement water conservation policies contained within Cupertino's Urban Water Management Plan to achieve 20 percent per capita water reductions by 2020.* *Supporting Measure*	Consistent. The City is the responsible party for this measure. The proposed project would comply with SB X7-7, which requires California to achieve a 20 percent reduction in urban per capita water use by 2020 and would implement best management practices for water conservation to achieve the City's water conservation goals. The project would not conflict with implementation of this measure.
Measure C-W-2 Recycled Water Irrigation Program *Explore opportunities to use recycled water for irrigation purposes to reduce potable water demands.* *Supporting Measure*	Consistent. The City is the responsible party for this measure. City must build the infrastructure to provide recycled water for projects to use. The proposed project includes a variety of on-site stormwater management, region-specific plants and trees grouped by hydrozone, and outdoor water use design required by the Water Efficient Landscape Ordinance (WELO) (CMC Chapter 14.15). The proposed project would not conflict with implementation of this measure.
Measure C-SW-1 Zero Waste Goal	Consistent. The City is the responsible party for this measure. As described in Chapter 3, Project Description, on page 3-24, during construction, the project would create a construction

Table 4.5-7 City of Cupertino Climate Action Plan Consistency Analysis

Goal	Project Consistency
Maximize solid waste diversion communitywide through preparation of a zero-waste strategic plan. *Supporting Measure*	waste management plan to reduce construction waste and divert materials from landfill and promote recycling of construction waste. Post construction the project would include a recycling program for occupants. The proposed project would not conflict with implementation of this measure.
Measure C-SW-2 Food Scrap and Compostable Paper Diversion *Continue to promote the collection of food scraps and compostable paper through the City's organics collection program.* *2035 GHG Reduction Potential: 750 MT CO_2e/yr*	**Consistent.** The proposed project would comply with the City's Curbside Composting program that allows multi-family complexes to put food scraps, food-soiled paper, and plants in their green or brown yard waste cart. The materials would be collected by the City garbage waste hauler. The proposed project would not conflict with implementation of this measure.
Measure C-SW-3 Construction & Demolition Waste Diversion Program *Continue to enforce diversion requirements in City's Construction & Demolition Debris Diversion and Green Building Ordinances.* *2035 GHG Reduction Potential: 550 MT CO_2e/yr*	**Consistent.** The City is the responsible party for this measure. As described in Chapter 3, Project Description, on page 3-24, the proposed project would comply with the City's Construction and Demolition Debris Diversion Ordinance (CMC Chapter 16.72), which requires applicable construction projects to divert 65 percent of construction waste. Pursuant to CMC Section 16.72.050, Information Required Before Issuance of Permit, the project would create a construction waste management plan to reduce construction waste and divert materials from landfill and promote recycling of construction waste. Prior to receiving a final building inspection, a construction recycling report would be submitted to show the tons recycled and disposed by material type. The proposed project would not conflict with implementation of this measure.
Measure C-G-1 Urban Forest Program *Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.* *2035 GHG Reduction Potential: 725 MT CO_2e/yr*	**Consistent.** The City is the responsible party for this measure. The proposed project would add approximately 400 trees on the site, as shown on sheet L.100 of the November 2018 Landscape Plan. As shown on sheet C3 of the February 2019 Preliminary Stormwater Control Plan, the current landscaping on the site is approximately 45,486 square feet, or 13.3 percent of the site. The new development will increase landscaped areas to approximately 87,846 square feet or 25.7 percent of the site. The new landscaping reduces storm water run-off, increases carbon dioxide plantings, and reduces the heat sink profile of the site. The proposed project would not conflict with implementation of this measure.

Source: City of Cupertino, 2015, Climate Action Plan, PlaceWorks.

CHAPTER 4.6, HAZARDS AND HAZARDOUS MATERIALS

The text in Section 4.6, Hazards and Hazardous Materials, on pages 4.6-7 of the Draft EIR is hereby amended as follows:

De Anza College is located directly south of Stevens Creek Boulevard, within 140 feet of the project site. In addition, one pre-school is located within 0.25-miles of the project site. As described under impact discussion HAZ-1, impacts related to potentially contaminated soils would be less than significant. Also see Chapter 4.1, Air Quality, impact discussions AQ-2 , which conclude that the potential for impacts to sensitive receptors due the release of fugitive dust during construction would be less than significant with implementation of Mitigation Measure AQ-2, and AQ-3, which concludes that the release of hazardous materials during construction would be less than significant without mitigation. Therefore, the proposed project would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school, and impacts would be *less than significant*.

CHAPTER 4.8, TRANSPORTATION

The text in Section 4.8, Transportation, on pages 4.8-6 of the Draft EIR is hereby amended as follows:

The level-of-service standards for each study intersection are as follows:

- **Stevens Creek Boulevard/Mary Avenue (#1).** The City of Cupertino level of service standard for signalized intersections is LOS D. Because the Stevens Creek Boulevard/Mary Avenue intersection is signalized, the level-of-service standard is LOS D or better.
- **Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal (#2).** The VTA CMP states a LOS E, except for facilities grandfathered in at LOS F, is acceptable for both the AM and PM peak hour at a study intersection. Because the Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal (#2) intersection is not identified as an intersection operating at LOS F, a minimum of the level-of-service standard of LOS E is acceptable for the study intersection, which is consistent with Caltrans' standards. However, this is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.

The text in Table 4.8-3 in Section 4.8, Transportation on page 4.8-11 of the Draft EIR is hereby amended as follows:

Table 4.8-3 Existing without Project Intersection Level of Service

ID #	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS
1	Stevens Creek Boulevard/Mary Avenue	Cupertino	D	AM	31.5	C
				PM	34.9	C
2	Stevens Creek Boulevard/SR-85 NB Ramp Terminal	Caltrans	~~E~~D[c]	AM	30.0	C
				PM	24.7	C

Notes: NB = northbound.
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. This is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 3 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 1 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

The text in Table 4.8-6 in Section 4.8, Transportation on page 4.8-17 of the Draft EIR is hereby amended as follows:

Table 4.8-6 Existing plus Project Intersection Level of Service Results

ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Existing without Project		Existing plus Project	
					Delay	LOS	Delay	LOS
1	Stevens Creek Boulevard/ Mary Avenue	Cupertino	D	AM	31.5	C	32.6	C
				PM	34.9	C	34.8	C
2	Stevens Creek Boulevard/ SR-85 NB Ramp Terminal	Caltrans	~~E~~D[c]	AM	30.0	C	34.3	C
				PM	24.7	C	23.0	C

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. This is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 4 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 5 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

The text in Table 4.8-7 in Section 4.8, Transportation on page 4.8-18 of the Draft EIR is hereby amended as follows:

Table 4.8-7 Cumulative without Project Intersection Level of Service Results

					Existing without Project		Cumulative without Project	
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS	Delay	LOS
1	Stevens Creek Boulevard/ Mary Avenue	Cupertino	D	AM	31.5	C	47.7	D
				PM	34.9	C	46.3	D
2	Stevens Creek Boulevard/ NB SR 85 On/Off Ramps	Caltrans	~~E~~D[c]	AM	30.0	C	46.1	D
				PM	24.7	C	20.3	C

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. This is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 5 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 5 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

The text in Table 4.8-8 in Section 4.8, Transportation on page 4.8-18 of the Draft EIR is hereby amended as follows:

Table 4.8-8 Cumulative plus Project Intersection Level of Service Results

					Cumulative without Project		Cumulative plus Project	
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS	Delay	LOS
1	Stevens Creek Boulevard/ Mary Avenue	Cupertino	D	AM	47.7	D	49.1	D
				PM	46.3	D	46.3	D
2	Stevens Creek Boulevard / NB SR 85 On/Off Ramps	Caltrans	~~E~~D[c]	AM	46.1	D	47.6	D
				PM	20.3	C	24.7	C

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. This is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 6 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 5 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

The text in Table 4.8-9 in Section 4.8, Transportation on page 4.8-20 of the Draft EIR is hereby amended as follows:

Table 4.8-9 Existing plus Project Signalized Conditions for the Westbound Right-turn Movement Intersection Level of Service and Queueing Results

					Existing plus Project		
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS[c]	Queue[d]
2	Stevens Creek Boulevard / SR-85 NB Ramp Terminal	Caltrans	~~E~~D[e]	AM	7.6	A	220 feet (9 cars)
				PM	8.0	A	243 feet (10 cars)

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. Represents the level of service with the controlled light at the right-turn lane only.
d. Vehicle queues are the 95th percentile. The 95th percentile queue length value indicates that a queue of this length or less would occur on 95 percent of the signal cycles that include a pedestrian or bicycle call.
e. This is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 4 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 2 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

The text in Table 4.8-10 in Section 4.8, Transportation on page 4.8-20 of the Draft EIR is hereby amended as follows:

Table 4.8-10 Cumulative plus Project Signalized Conditions for the Westbound Right-turn Movement Intersection Level of Service and Queueing Results

					Existing plus Project			Cumulative plus Project		
ID	Intersection	Jurisdiction	LOS Threshold[a]	Peak Hour[b]	Delay	LOS[c]	Queue[d]	Delay	LOS[c]	Queue[d]
2	Stevens Creek Boulevard / SR-85 NB Ramp Terminal	Caltrans	~~E~~D[e]	AM	7.6	A	220 feet (9 cars)	8.2	A	246 feet (10 cars)
				PM	8.0	A	243 feet (10 cars)	11.1	B	284 feet (12 cars)

Notes: NB = northbound
a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).
b. AM = morning peak hour, PM = evening peak hour.
c. Represents the level of service with the controlled light at the right-turn lane only.
d. Vehicle queues are the 95th percentile. The 95th percentile queue length value indicates that a queue of this length or less would occur on 95 percent of the signal cycles that include a pedestrian or bicycle call.
e. This is a CMP intersection within the City of Cupertino. Cupertino applies its own standard of LOS D to CMP intersections.
Source: Kimley-Horn and Associates, Hexagon Transportation Consultants, 2018, 2019. (see Table 6 of the 2018 *Westport Cupertino – Transportation Analysis and* Table 4 of the 2019 *Westport Cupertino – SR 85 Interchange Analysis* provided in Appendix H of this Draft EIR).

The text in Section 4.8, Transportation, on pages 4.8-23 and 4.8-24 of the Draft EIR is hereby amended as follows:

Project-specific VMT was determined using CalEEMod and was calculated for Existing and Existing plus Project conditions. As previously stated, the existing commercial space (71,250 square feet), with an 85 percent occupancy rate produces an approximate annual VMT of 2,782,747 miles, or a daily VMT of 7,624 miles. The proposed project would produce an approximate annual VMT of ~~2,662,683~~2,663,868 miles, or a daily VMT of ~~7,295~~7,298 miles. This would be a reduction of approximately ~~120,064~~118,879 miles annually, or ~~329~~326 miles daily.

The text in Section 4.8, Transportation, on pages 4.8-23 of the Draft EIR is hereby amended as follows:

As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 in General Plan buildout conditions. The proposed project would construct a 242 residential units, and 20,000 square feet of retail space, which is consistent with the land use evaluated in the General Plan EIR, and therefore, would not directly result in any additional new population growth or employment growth beyond what was analyzed in the General Plan EIR. As described in Chapter 3, Project Description, of the Draft EIR, in Section 3.4.3, Population and Employment Projections, the proposed project would generate 695 new residents and 70 new employees for a total of 765 people. The project would produce total annual VMT of 2,663,868. Therefore, the proposed project would have a per capita VMT impact of 3,482 vehicle miles per capita annually or 9.54 daily vehicle miles per day. As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 under General Plan buildout conditions. Therefore, the project's per capita VMT would be less than the City's per capita VMT for General Plan buildout. Accordingly, implementation of the proposed project would be consistent with and would have no effect on the VMT estimates presented in the General Plan EIR.

CHAPTER 4.9, UTILITIES AND SERVICE SYSTEMS

The text in the third paragraph in Section 4.9.2.1, Cupertino Sanitary District, on page 4.9-4 of the Draft EIR is hereby amended as follows:

The CSD wastewater system also flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara is 13.8 mgd during peak wet weather flows. The existing CSD peak wet weather flow into the Santa Clara system is modeled at ~~13.29~~13.14 mgd.[4]

Footnote:

[4] Mark Thomas & Co. Inc., Cupertino Sanitary District, ~~February 20~~December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara*.

The text in Section 4.9.2.2, Existing On-Site Uses, on page 4.9-4 of the Draft EIR is hereby amended as follows:

The project site is currently occupied by an approximately 71,250 square-foot shopping center that is currently in operation at 85 percent occupancy (or 60,560 square feet). Based on the ~~May 2007 *City of Santa Clara Sewer Capacity Assessment* and~~ CSD's *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019, the estimated ~~wastewater~~ ADWF generation rate is 0.073 gpd per square foot of retail space. Therefore, the existing uses generate an ADWF of approximately ~~21,376~~4,421 gallons per day (gpd) or ~~0.0213~~ 0.004 ~~million gallons per day (~~mgd~~)~~. According to the CSD, the peak wet weather flow is calculated by multiplying the ADWF by a factor of 2.95. Therefore, the peak wet weather flow is 13,042 gpd or 0.013 mgd.[5]

Footnote:

[5] ~~71,250 sf retail x 0.3 gpd per square foot = 21,376 gpd or 0.0213 mgd~~ Mark Thomas & Co., Inc., Benjamin T. Porter, Cupertino Sanitary District Manager-Engineer, December 18, 2019, letter submitted to Gian Martire, Senior Planner, City of Cupertino, commenting on the November 2019 Draft EIR; 60,560 square

feet of retail x 0.073 gpd per square foot = 4,421 gpd or 0.004 mgd average daily flow. 4,421 gpd average daily flow x 2.95 = 13,042 gpd or 0.013 mgd peak daily flow.

The text in the first paragraph in impact discussion UTIL-1 starting on page 4.9-5 of the Draft EIR is hereby amended as follows:

Based on the ~~May 2007 *City of Santa Clara Sewer Capacity Assessment*~~ CSD's *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019, the estimated ~~wastewater~~ average dry weather flow (ADWF) generation rate for multi-family residential uses is 133 gallons per day (gpd) per unit, 55 gpd per person per townhome (or rowhouse), and 0.073 gpd per square foot of retail space. The proposed 242 residential units are comprised of 154 multi-family units and 88 townhomes. Based on an average household size of 2.87 persons,[6] the townhomes would generate 253 new residents. The proposed project also includes 20,000 square feet of retail space. Applying ~~this~~ these generation rates, the proposed ~~242 residential units and 20,000 square feet of retail space would generate up to 38,186 gpd or approximately 0.0382 mgpd of wastewater~~ project would generate approximately 35,833 gpd or 0.036 mgd of ADWF. Applying the CSD's peak wet weather flow generation rate (the ADWF multiplied by a factor of 2.95), the peak wet weather flow for the proposed project would be 105,707 gpd or 0.106 mgd.[~~6~~7]

As described in Section 4.9.2.2, Existing On-Site Uses, the operational shopping center currently generates ~~about 21,376 gpd or 0.0213 mgd~~ an ADWF of 4,421 gpd or 0.004 mgd and about 13,042 gpd or 0.013 mgd of peak wet weather flow. Therefore, the net increase for the proposed project ~~is 16,810 gpd or 0.0168 mgd~~ would be 31,412 gpd or 0.031 mgd ADWF and 92,665 gpd or 0.093 mgd peak wet weather flow.[~~7~~8]

Wastewater Treatment Capacity

The ADWF consists of average daily sewage flows and any groundwater that infiltrates sewer pipeline and manhole defects located below the ground surface. The SJ/SCWPCP currently has a total ADWF capacity of ~~450~~167 mgd.[9] Combined, the proposed project's net increase of ~~wastewater generation of~~ ~~0.0168~~ 0.031 mgd ADWF and the current wastewater generated system-wide of ~~105~~ 110 mgd of ADWF, the proposed project would not exceed the SJ/SCWPCP's current total capacity of ~~450~~ 167 mgd for ADWF.

The CSD has a contractual treatment allocation of 7.85 mgd ~~Average Daily Dry Flow~~ ADWF with the SJ/SCWPCP. At the time of the General Plan EIR, the wastewater generation of 5.3 mgd was estimated by the CSD.[~~8~~10] The existing wastewater flow of 5.3 mgd plus the proposed project's ~~wastewater~~ ADWF of ~~0.0168~~ 0.031 mgd would not exceed the City's contractual allocation limit of 7.85 mgd. The proposed project is also within the amount of development (4,421 residential units and 1,343,679 commercial square feet) evaluated in the General Plan EIR;[~~9~~11] therefore, no impact would result.

Sewer System Capacity

The CSD wastewater system flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara allows 13.8 mgd during peak wet weather flows for this portion of the Santa Clara sewer system.[12] The existing CSD peak wet weather flow into the Santa Clara system is ~~13.29~~ 13.14 mgd.[~~10~~13] However, the estimated wastewater generation from the proposed project and from other potential projects, as established by the General Plan and other approved projects, is approximately ~~14.25~~ 14.61 mgd, which is the total capacity needed to serve the General Plan buildout.~~[11]~~[14] Therefore, the proposed project, and other approved and potential projects as established by the General Plan 2040 buildout, will require a reduction in sewer generation from the CSD system prior to flowing into the City of Santa Clara system, or additional capacity rights will need to be acquired from the City of Santa Clara.

~~CSD performed smoke testing[12] on a portion of the sewer system in 2018. The results of the smoke testing showed that certain portions of their system are being impacted by inflow from illegal connections to the system. These illegal connections include area drains, catch basins, and roof rainwater leaders from both public and private facilities within the cities of Cupertino and Saratoga jurisdictions. These illegal connections collect storm water and direct the flow to the sewer system. Calculating the flows from these illegal connections, using the Manning's flow equation[13] and the size of the areas that flow to these connections, there is an addition of approximately 0.4 mgd to the sanitary sewer peak wet weather flow. Disconnecting these illegal connections and redirecting these storm water flows to the public storm drain system would result in a reduction of the sewer peak wet weather from 14.25 mgd to 13.85 mgd. Further investigation of the CSD system is anticipated and disconnection of additional illicit connects is expected, which would provide further potential reduction to the peak wet weather flow.~~

~~However, until such corrections to the system can occur,~~ Therefore, the operation of the proposed project would exceed the 13.8 mgd contractual limit through the City of Santa Clara sewer system resulting in a potentially significant impact.

Footnotes:

[6] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 projections of the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino.

~~[6]~~[7] (~~242~~ 154 units x 133 gpd = ~~32,186~~20,482 gpd) + (88 townhomes x 55 gpd per person x 2.87 persons/household = 13,891 gpd) + (20,000 sf retail x 0.073 gpd per square foot = ~~6,000~~1,460 gpd) = ~~38,186~~35,833 gpd average dry weather flow; 35,833 gpd average dry weather flow x 2.95 = 105,707 gpd or 0.106 mgd of peak wet weather flow.

~~[7]~~[8] average dry weather flow: ~~38,186~~ 35,833 gpd proposed generation – ~~21,376~~4,421 gpd existing generation = ~~16,810~~ 31,412 gpd (or ~~0.0168~~ 0.031 mgd) net increase.
peak wet weather flow: 79,007 gpd proposed generation – 13,042 gpd existing generation = 65,965 gpd (0.066 mgd) net increase.

[9] The San Jose Santa Clara Water Pollution Control Plant Master Plan, November 2013, page 15; San Francisco Bay Regional Water Quality Board, September 10, 2014, Order No. R2-2014-0034 NPDES No. CA0037842; City of San Jose Environmental Services, https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility, accessed January 2, 2020.

~~[8]~~[10] City of Cupertino, General Plan (Community Vision 2015–2040), Appendix B: Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93.

~~[9]~~[11] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015).

[12] Peak wet weather flow consists of the average dry weather flow or ADWF in addition to infiltration and inflow. Infiltration is rainfall that enters the sewer system through manhole defects. Inflow is rainfall that enters the sewer system through illegal connections, such as catch basins, downspouts, area drains and manhole covers. Peak wet weather flow is the highest measured hourly flow that occurs during wet weather.

~~[10]~~[13] Mark Thomas & Co. Inc., ~~August 29, 2019~~ December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara*.

~~[11]~~[14] Mark Thomas & Co. Inc., ~~August 29, 2019~~ December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara.* ~~Sewage coefficients use to calculate the sewer generation rates for the various uses in the project and the General Plan buildout were taken from the San Jose- Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient table and from the City of Santa Clara Sanitary Sewer Capacity Assessment, May 2007, as well as CSD estimated flow rates based on measured water usages.~~

~~[12] Many municipalities implement smoke testing programs to assess the condition of sanitary sewer system. Smoke testing is the process of injecting artificially produced smoke into a blocked off pipeline segment to see where the smoke emerges. If the line has defects, the smoke will find the break and try to escape through the break. Smoke testing is one of the best cost-effective ways to locate defects in the main sewer line and service laterals that connects to a site.~~

~~[13] The Mannings equation is an empirical equation that applies to uniform flow in open channels and is a function of the channel velocity, flow area and channel slope.~~

~~[14] Mark Thomas and Associates, July 19, 2018, Email communication with Cupertino Public Works.~~

The text in Mitigation Measure UTIL-1 starting on page 4.9-6 of the Draft EIR is hereby amended as follows:

Mitigation Measure UTIL-1: No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods:

1. Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or
2. Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD.

The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the ~~*San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient* table in the May 2007, *City of Santa Clara Sanitary Sewer Capacity Assessment*,[14] and *California Green Building Standards*,~~ CSD in the *Flow Modeling Analysis for the Homestead Flume Outfall to the City of Santa Clara*, prepared by Mark Thomas & Co. Inc., dated December 6, 2019, unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD. To calculate the peak wet weather flow for a 10-year storm event, the average daily flow rate shall be multiplied by a factor of 2.95 as required by CSD pursuant to their December 2019 flow modeling analysis.

Footnote:
~~[19] Mark Thomas and Associates, July 19, 2018, Email communication with Cupertino Public Works.~~

CHAPTER 5, ALTERNATIVES TO THE PROPOSED PROJECT

The text in Section 5.4.2, Alternatives Analysis, on page 5-4 of the Draft EIR is hereby amended as follows:

In addition to the No Project Alternative, this EIR discusses ~~two~~ three project alternatives and compares them to the proposed project, as discussed below. As previously stated, the alternatives were selected because of their potential to reduce the significant-but-mitigable impacts of the proposed project. The ~~three~~ four alternatives are:

- No Project Alternative
- No Retail Development Alternative
- Reduced Retail Development Alternative
- Increased Senior Housing Alternative

The first alternative is the CEQA-required "No Project" Alternative, and assumes that no changes to the existing shopping center would occur. The No Retail Development Alternative would construct only the residential components of the proposed project at the same density as the proposed project, but would not include the retail in Residential Retail Buildings 1 and 2. The Reduced Retail Development Alternative would construct the same residential elements as the proposed project, but would reduce the retail in Residential Retail Building 1 from 17,600 square feet to 7,600 square feet, which would reduce the overall retail on the project site by 50 percent. The Increased Senior Housing Alternative would re-design Residential-Retail Building 1 to include 140 senior housing units, 27 life guidance (memory care) units and associated facilities, would reduce the ground floor retail from 17,600 square feet to 5,640 square feet, would add 2,140 square feet of medical/office space, and would include amenities such as a fitness center, a bar, and a dining area.

The text in Section 5.4.3, Assumptions and Methodology, on page 5-5 of the Draft EIR is hereby amended as follows:

The alternatives analysis compares the impacts of the alternatives to the proposed project. The No Project Alternative assumes no change in the existing site and no new development. The overall extent of the development on the project site for the other ~~two~~ three alternatives is similar to the proposed project, but with all three providing less retail square footage and one increasing the number of senior units with assisted living and memory care accommodations. As described in Chapters 4.1, Air Quality, Chapter 4.2, Biological Resources, Chapter 4.3, Cultural and Tribal Cultural Resources, Chapter 4.4, Geology and Soils, and Chapter 4.7, Noise, mitigation measures would be required to reduce construction related impacts, and Chapter 4.9, Utilities and Service Systems, requires mitigation for operational impacts associated with wastewater generation and the capacity of the sanitary sewer system. This alternatives analysis assumes that all applicable regulations and all mitigation measures identified in this EIR for the proposed project would be implemented for the No Retail Development Alternative, ~~and~~ the Reduced Retail Development Alternative, and the Increased Senior Housing Alternative.

The following analysis compares the potentially significant environmental impacts of the ~~three~~ four alternatives with the project-related impacts for each of the environmental topics analyzed in detail in Chapters 4.1 through 4.9 of this Draft EIR. The impacts of each alternative are classified as greater, reduced, or similar to the level of impacts associated with the proposed project. Table 5-1 summarizes the impacts of each of the alternatives compared to the proposed project.

The text in Table 5-1 in Section 5.4.3, Assumptions and Methodology, on page 5-5 of the Draft EIR is hereby amended as follows:

Table 5-1 Comparison of Impacts from Project Alternatives and the Proposed Project

Topic	Proposed Project	No Project Alternative	No Retail Development Alternative	Reduced Retail Development Alternative	Increased Senior Housing Alternative
Air Quality	LTS/M	>	>	=	<
Biological Resources	LTS/M	<	=	=	=
Cultural and Tribal Cultural Resources	LTS/M	<	<	<	=
Geology and Soils	LTS/M	<	<	<	=
Greenhouse Gas Emissions	LTS	>	>	=	>
Hazards and Hazardous Materials	LTS	<	=	=	=
Noise	LTS/M	>	>	=	<
Transportation	LTS	>	>	=	<
Utilities and Service Systems	LTS/M	<	<	<	>

Notes:

LTS	Less Than Significant	<	Reduced impact in comparison to the proposed project
LTS/M	Less Than Significant with Mitigation	=	Similar impacts in comparison to the proposed project
		>	Greater impact in comparison to the proposed project

The text in Section 5.5.2.1, Air Quality, on page 5-7 of the Draft EIR is hereby amended as follows:

Under the No Project Alternative, pollutant emissions associated with vehicle trips would continue to occur. The proposed project would generate fewer daily trips before trip credits are applied (2,287 existing daily trips compared to 2,174 proposed daily trips) and with trip credits (2,209 existing daily trips compared to -275 proposed daily trips). Furthermore, the proposed residential mixed-use project would result in fewer vehicle miles traveled (VMT) (existing annual VMT of 2,782,747 compared to proposed annual VMT ~~2,662,683~~2,663,868). Accordingly, air quality impacts from vehicles would be less under the proposed project. Because vehicles are considered a major source of air pollutants, the proposed project would have fewer impacts than those under existing conditions. Therefore, overall air quality impacts of the No Project Alternative would be ***greater*** compared to the proposed project.

The text in Section 5.5.2.9, Utilities and Service Systems, on page 5-9 of the Draft EIR is hereby amended as follows:

The utilities and service systems impacts of the proposed project are fully mitigable with implementation of Mitigation Measure UTIL-1. Based on the capacity of the sanitary sewer system, any new development may result in a determination by the wastewater treatment provider, that it does not have capacity to serve the project's projected demand in addition to the provider's existing commitment. Under the No Project Alternative, the site would continue to operate as is and no new construction would occur; therefore, there would not be an increase in wastewater generation on the project site (~~21,376~~4,421 gallons per day (gpd) for the existing uses) compared to a net increase of ~~16,810~~31,412 gpd (for the proposed project). Accordingly, overall impacts to utilities and service systems with regard to the capacity of the wastewater treatment system for the No Project Alternative would be ***reduced*** compared to the proposed project.

Section 5.8, Increased Senior Housing Alternative, is hereby added to Chapter 5, Alternatives to the Proposed Project, starting on page 5-17 of the Draft EIR as follows:

5.8 Increased Senior Housing Alternative

5.8.1 Description

Under the Increased Senior Housing Alternative, the 115 market-rate units in Residential-Retail Building 1 would be replaced with senior housing including 140 assisted living units and 27 life guidance (memory care) units. The first-floor retail space in Residential-Retail Building 1 would be reduced from 17,600 square feet in the proposed project to 5,640 square feet in the Increased Senior Housing Alternative, a reduction of 11,960 square feet. The remaining space on the first floor of Residential-Retail Building 1 would consist of 2,140 square feet of medical/office space and 23,470 square feet consisting of two lobbies and senior amenity areas, including a fitness center, dining area, and bar area, which would be open to the public. The life guidance units would be located on the second floor of Residential-Retail Building 1 and a dining/kitchen area, activity center and library, and terrace would be dedicated to the life guidance units on this floor. The assisted living units would be located on floors three through six. Level six would also include a terrace area for the assisted living residents. Under this alternative the common green space on the western portion of the project site would be reconfigured and could include a pool terrace on the ground floor. While the number of units and the general layout for Residential-Retail Building 2 (below market rate senior units), the Townhomes, and the Rowhouses would remain the same as under the proposed project, the overall building area of this alternative would be slightly less than the proposed project.

Same as the proposed project, the Increased Senior Housing Alternative would include a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, and off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on-ramp consistent with the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp.

5.8.2 Impact Discussion

The potential environmental impacts associated with the Increased Senior Housing Alternative are described below and are compared to the proposed project.

5.8.1.1 Air Quality

The temporary construction-related air quality impacts of the proposed project are fully mitigable with implementation of Mitigation Measure AQ-2, and operational impacts would be less than significant. Under the Increased Senior Housing Alternative, the short-term emissions from construction would be similar to that of the proposed project due to a similar building footprint and excavation activities, and anticipated construction equipment mix and schedule. Therefore, construction-generated fugitive dust and other pollutant emissions associated with construction activities at the site would also be significant-but-mitigable. As described in Chapter 4.1, Air Quality, the primary method of determining consistency with the 2017 Clean Air Plan growth assumptions is consistency with the General Plan land use designations and zoning ordinance designations for the site. Like the proposed project, the Increased Senior Housing Alternative would not exceed regional employment, population, and housing planning projections that would have the potential to be inconsistent with the regional inventory compiled as part of the 2017 Clean Air Plan. Because the General Plan was adopted prior to the adoption of the 2017 Clean Air Plan, it can be assumed that the 2017 Clean Air Plan incorporates the growth forecast in the General Plan. The conditions of the projects site would not change under this alternative, and the air quality benefits associated with being in a Priority Development Area and Transit Priority Area would also apply to this alternative. Furthermore, as shown below in the transportation discussion, under the Increased Senior Housing Alternative, pollutant emissions associated with vehicle trips would be less than the proposed project, due to the 472 fewer daily trips and 853 fewer vehicle miles traveled under the Increased Senior Housing Alternative compared to the proposed project (see Table 5-5 and Table 5-6 respectively). Table 5-2 below shows that operational air quality emissions would not exceed the BAAQMD thresholds. Table 5-3 shows that the emission due to the Increased Senior Housing Alternative would be slightly less compared to the proposed project. Therefore, this alternative, like the proposed project, would not conflict with or obstruct the implementation of the BAAQMD's 2017 *Clean Air Plan* and would not expose sensitive receptors to substantial toxic air contaminants or CO hotspots associated with construction or operation.

Table 5-2 Average Daily Project Operational Emissions Unmitigated (Increased Senior Housing)

	Pollutant (average pounds per day)[a, b]					
			Exhaust		Fugitive Dust	
Emissions Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Annual Emissions (maximum tons per year)						
Area Source Emissions	2	≤1	≤1	≤1	--	--
Energy Emissions	≤1	≤1	≤1	≤1	--	--
Mobile Emissions[a]	≤1	2	≤1	≤1	2	≤1
Total Alternative Unmitigated Emissions	2	2	≤1	≤1	1	≤1
BAAQMD Threshold[a]	10	10	15	10	N/A	N/A
Is Threshold Exceeded?	No	No	No	No	N/A	N/A
Average Daily Emissions (pounds)						
Area Source Emissions	11	≤1	≤1	≤1	--	--
Energy Emissions	≤1	1	≤1	≤1	--	--
Mobile Emissions[a]	2	10	≤1	≤1	8	2
Total Project Unmitigated Emissions	13	11	≤1	≤1	8	2
BAAQMD Threshold[b]	54	54	82	54	N/A	N/A
Is Threshold Exceeded?	No	No	No	No	N/A	N/A

Notes:

a. Mobile emissions conservatively represent emissions associated with the full project (i.e., 2,174 daily vehicle trips), and do not take credit/trip reductions for the existing uses.

b. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, 2017.

Source: Kimley-Horn and Associates, PlaceWorks. 2019, 2020.

Table 5-3 Average Daily Project Operational Unmitigated Emissions Comparison

	Pollutant (average pounds per day)[a, b]					
			Exhaust		Fugitive Dust	
Emissions Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Annual Emissions (maximum tons per year)						
Total Proposed Project Emissions	3	2	<1	<1	2	<1
Total Alternative Project Emissions	2	2	<1	<1	1	<1
BAAQMD Threshold[a]	10	10	15	10	N/A	N/A
Is Threshold Exceeded?	No	No	No	No	N/A	N/A
Average Daily Emissions (pound)						
Total Proposed Project Emissions	16	13	<1	<1	9	2
Total Alternative Project Emissions	13	11	<1	<1	8	2
BAAQMD Threshold[a]	54	54	82	54	N/A	N/A
Is Threshold Exceeded?	No	No	No	No	N/A	N/A

Notes:
a. Mobile emissions conservatively represent emissions associated with the full project (i.e., 2,174 daily vehicle trips), and do not take credit/trip reductions for the existing uses.
b. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, 2017.
Source: Kimley-Horn and Associates, PlaceWorks. 2019, 2020.

As shown, the air quality impacts of the Increased Senior Housing Alternative would be ***less*** than the proposed project and like the proposed project would be fully mitigable with implementation of Mitigation Measure AQ-2 and operational impacts would be less than significant.

5.8.1.2 Biological Resources

The biological resource impacts of the proposed project are fully mitigable with implementation of Mitigation Measures BIO-1 and BIO-2. The Increased Senior Housing Alternative would result in similar development on the project site as the proposed project; therefore, the relationship to natural resources on the project site as described in Chapter 4.2, Biological Resources, of this Draft EIR would be similar under both this alternative and the proposed project.

As described in Chapter 4.3, an Arborist Report was prepared for the proposed project and is included in Appendix D, Arborist Report & Tree Removal Plan, of the Draft EIR. Of the 83 trees surveyed, the Arborist Report identified 74 trees, including 14 protected trees, that would be directly impacted by development and would require removal. Under this alternative, the number of trees protected by the City's Tree Protection Ordinance that would be impacted would be the same as the number of trees affected by the proposed project.

The mitigation measures listed above, as well as compliance with the City's existing ordinances, including City's Tree Preservation Ordinance, would apply under this alternative. Therefore, the potential impacts to nesting birds and potential habitat for special-status birds that may be present on-site during construction related activities and removal of trees protected of the City's Tree Preservation Ordinance would be similar. Impacts to biological resources from the Increased Senior Housing Alternative would be ***similar*** to the proposed project and would be fully mitigable with implementation of Mitigation Measures BIO-1 and BIO-2.

5.8.1.3 Cultural and Tribal Cultural Resources

The cultural resource impacts of the proposed project are fully mitigable with the implementation of Mitigation Measure CULT-1. Development under the Increased Senior Housing Alternative would have a similar building envelope as the proposed project and would result in development on an already disturbed site. The Increased Senior Housing Alternative would include a subterranean parking level, in which excavation would be required, similar to the proposed project. The same mitigation measures that apply to the proposed project would apply to this alternative, as would State laws and regulations to protect buried human remains and cultural and tribal cultural resources. Accordingly, the potential impacts of the Increased Senior Housing Alternative would be ***similar*** to the proposed project and would be fully mitigable with the implementation of Mitigation Measure CULT-1.

5.8.1.4 Geology and Soils

The impacts related to unknown unique paleontological resources of the proposed project would be fully mitigable with implementation of Mitigation Measure GEO-1. There are no known unique paleontological resources on the project site, and the geology and soils on the project site are common throughout the city and region and are not considered to be unique. Under the Increased Senior Housing Alternative, buildings would be constructed within the same development footprint as the proposed project, with the addition of a 4,500 square-foot pool terrace that could reconfigure the common open space on-site. Accordingly, the potential impacts of the Increased Senior Housing Alternative would be ***similar*** to the proposed project and would be fully mitigable with the implementation of Mitigation Measure GEO-1.

5.8.1.5 Greenhouse Gas Emissions

The impacts related to GHG emissions of the proposed project are less than significant and no mitigation measures are required. Under the Increased Senior Housing Alternative, the existing buildings would be demolished, and the new structures would have a similar building footprint. However, Residential-Retail Building 1 would include a different mixt of residential uses by adding 140 assisted living units and 27 life guidance (memory care) units, instead of the 115 market-rate units under the proposed project. The first-floor retail in Residential-Retail Building 1 would be reduced from 17,600 square feet under the proposed project to 5,640 square feet under the Increased Senior Housing Alternative. The remaining space on the first floor of Residential-Retail Building 1 would include 2,140 square feet of medical/office space and 23,470 square feet with two lobbies and amenity areas including, a fitness center, dining area, and bar area.

Under the Increased Senior Housing Alternative, the short-term emissions from construction would be similar to that of the proposed project due to a similar building footprint and excavation activities, and anticipated construction equipment mix and schedule. Therefore, construction-generated GHG emissions associated with construction activities at the site would also be less than significant and no mitigation measures would be required.

As shown in Table 5-4, the Increased Senior Housing Alternative would decrease operational GHG emissions associated with mobile sources, compared to the proposed project, due to a decrease in daily vehicle miles traveled. However, the proposed mix of uses in the Increased Senior Housing Alternative would slightly increase operational GHG emissions from building energy, waste, and water compared to the proposed project due to an increase in residents that are on-site most of the day and the 24-hour operation of the memory care facility. Neither the proposed project nor the Increased Senior Housing Alternative exceed the thresholds set by BAAQMD. Accordingly, the GHG impacts of the Increased Senior Housing Alternative would be less than significant and no mitigation measures are required. Because GHG emissions would be slightly increased (359 compared to 387 MTCO$_2$e per year) impacts are ***greater*** compared to the proposed project although still less-than-significant.

Table 5-4 Operational Greenhouse Gas Emissions Comparison

Category	MTCO$_2$e/year [a]				
	Existing	Proposed Project	Net Change from Proposed Project and Existing Conditions	Alternative Project	Net Change from Senior Alternative and Existing Conditions
Area[b]	<1	8	8	15	15
Energy	232	648	416	804	572
On-Road Mobile Sources[c]	1,214	1,102	-112	951	-263
Waste[d]	19	33	14	42	23
Water/Wastewater	19	51	32	59	40
Total Annual Project GHG Emissions[e]	**1,484**	**1,843**	**359**	**1,871**	**387**
BAAQMD Bright-Line Threshold	**NA**	**NA**	**1,100 MTCO$_2$e/year**	**NA**	**1,100 MTCO$_2$e/year**
Exceeds BAAQMD Thresholds?	NA	NA	No	NA	No

Notes: NA: not applicable

a. Emissions were calculated using CalEEMod 2016.3.2. Notes: Emissions may not total to 100 percent due to rounding.

b. The area source emissions include compliance with BAAQMD Regulation 6, Rule 3 (Wood Burning Devices) and were applied in the mitigation tab of CalEEMod.

c. The mobile emissions modeled CalEEMod emissions are based on the proposed project total daily trip generation of 2,174 vehicles and the Increased Senior Housing Alternative total daily trip generation of 1,602. Credit for internal trip capture and proximity to transit was applied in the CalEEMod mitigation module (i.e., land use and site enhancement, increase density, and increase diversity). These measures were applied in accordance with the criteria within the California Air Pollution Control Officers Association (CAPCOA), *Quantifying Greenhouse Gas Mitigation Measures* (2010) guidance, and the CalEEMod User's Guide.

d. The waste source emissions include compliance with AB 939 requiring 50 percent diversion of the solid waste stream.

e. Emissions may not total to 100 percent due to rounding.

Source: Kimley-Horn and Associates, PlaceWorks, 2019, 2020.

5.8.1.6 Hazards and Hazardous Materials

The impacts related to hazards and hazardous materials from construction and operation of the proposed project are less than significant without mitigation. Like the proposed project, the Increased Senior Housing Alternative would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, and would not emit hazardous emissions or use hazardous materials within 0.25 miles of a school.

Similar to the proposed project, the Increased Senior Housing Alternative would involve the use of small amounts of hazardous materials for cleaning and maintenance purposes, such as cleansers, degreasers, pesticides, and fertilizers. Under both the proposed project and the Increased Senior Housing Alternative, any businesses that transport, generate, use, and/or dispose of hazardous materials in Cupertino are subject to existing hazardous materials regulations, such as those implemented by Santa Clara County Department of Environmental Health (DEH) Hazardous Materials Compliance Division (HMCD), and hazardous materials permits from the Santa Clara Fire Department (SCCFD). However, unlike the proposed project, the Increased Senior Housing Alternative would include medical offices and a memory care center, which could include bio-medical waste. This hazardous material, like those under the proposed project, would be regulated by the Santa Clara County HMCD, which requires a hazardous materials business plan (HMBP) be created for businesses that may store, transport, or dispose of hazardous materials. As the Certified Unified Program Agency, Santa Clara County HMCD is required to regulate HMBPs and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk-management plans. The HMBP is required to contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on development sites. The HMBP also contains an emergency-response plan, which describes the procedures to mitigate hazardous release, procedures, and equipment to minimize potential damage of a hazardous materials release, and provisions for immediate notification of the Governor’s Office of Emergency Services (Cal OES) and other emergency-response personnel, such as the SCCFD. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, Santa Clara County HMCD is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances.

Although development under the Increased Housing Alternative could involve the transport, use and disposal of bio-medical waste, development under both this alternative and the proposed project would be required to comply with federal, State, and local laws regulating the transport, use, and disposal of hazardous materials. Therefore, impacts of the Increased Senior Housing Alternative related to hazards and hazardous materials would be similar compared to the proposed project and would be less than significant without mitigation.

5.8.1.7 Noise

The operational impacts related to noise from the proposed project are less than significant and the construction impacts are fully mitigable with implementation of Mitigation Measure NOISE-1. Under the Increased Senior Housing Alternative, the short-term increase in ambient noise levels from construction would be similar to that of the proposed project due to a similar building footprint and excavation activities, and anticipated construction equipment mix and schedule. Similarly, construction vibration impacts would be comparable under this alternative. Parking noise would be less when compared to the proposed project due to fewer proposed retail uses. The heating, ventilation, and air conditioning (HVAC) and mechanical equipment noise impacts would be comparable under this alternative. Under this alternative, a larger proportion of the future residents would be seniors, compared to the proposed project, and, therefore, the Increased Senior Housing Alternative would create fewer vehicular trips (see Table 5-5), reducing traffic-related noise generated by the project. Under this alternative, future residents and surrounding residents would still be in walking distance of neighborhood-serving retail, and amenities such as the pool terrace, fitness center, and dining area and bar would provide residents with services on-site and would be open to the public. Therefore, noise impacts of the Increased Senior Housing Alternative would be ***less*** than the proposed project and would be less than significant during operation and construction impacts would be fully mitigable with implementation of Mitigation Measure NOISE-1.

5.8.1.8 Transportation

The transportation impacts of the proposed project are less than significant, and no mitigation measures are required. Similar to the proposed project, the Increased Senior Housing Alternative would not conflict with the Cupertino General Plan or Santa Clara Valley Transportation Authority. Additionally, as shown in Table 5-5, under the Increased Senior Housing Alternative the daily vehicle trips would decrease due to the replacement of non-senior units with assisted living and memory care units and the availability of on-site amenities such as a pool terrace, fitness center, and dining area.

Table 5-5 Daily Vehicle Trips Proposed Project and Alternative Comparison

	Daily	AM Peak Hour			PM Peak Hour		
	Trips	In	Out	Total	In	Out	Total
Existing Oaks Shopping Center[a]	**2,209**	**36**	**21**	**57**	**73**	**79**	**152**
Proposed Project[b]							
Total Project Trips Before Trip Reductions	2,174	35	73	108	104	82	186
Proposed Project After Trip Reductions	1,934	33	71	104	77	53	130
Net Change from Existing Conditions	**-275**	**-3**	**50**	**47**	**4**	**-26**	**-22**
Increased Proposed Alternative[c]							
Total Alternative Trips Before Reductions	1,602	93	42	51	137	70	67
Proposed Alternative After Trip Reductions	1,462	39	0	39	58	54	112
Net Change from Existing Conditions	**-747**	**3**	**-21**	**-18**	**-15**	**-45**	**-40**
Net Change between the Proposed Project and Proposed Alternative	***-472***	***6***	***-71***	***-65***	***-19***	***1***	***-18***

Notes:
a. The existing trips credited are a total of 85 percent (2,287 trips) of the maximum trips (2,690 trips) if the shopping center were fully occupied minus 34 percent (78 trips) of the total 230 PM peak hour trips that make up the by-pass credits which apply to the existing shopping center.
b. Trip generation based on daily trip generation rates in the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition, which applies Code 220 for low-rise dwelling units; Code 221 for mid-rise dwelling units; Code 252 for senior units; and, Code 820 for retail.
c. Trip generation based on daily trip generation rates in the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition, which applies Code 252 for senior units; and, Code 820 for retail; Code 254 for assisted living; Code 255 continuing care retirement community; and Code 720 for medical-dental office building.
Sources: Kimley-Horn and Associates, Hexagon Transportation Consultants, November 2018. (see Table 2 of the *Westport Cupertino – Transportation Analysis* in Appendix H of the Draft EIR). Kimley-Horn and Associates. March 2020. Westport Cupertino – Alternative Proposal: Trip Generation Comparison (see Table 1 Alternative Project, Original Project and Existing Conditions Trip Generation in Appendix C of this Response to Comments Document).

Because the AM and PM peak hour trips would be reduced under this alternative, the less-than-significant impacts to Stevens Creek Boulevard/Mary Avenue intersection #1 and Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal intersection #2 would be further reduced.

Both the proposed project and the Increased Senior Housing Alternative are consistent with General Plan Policy M-8.2: Land Use, which requires the City to support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita Vehicle Miles Traveled (VMT), reducing impacts on the City's transportation network, and maintaining the desired levels of service for all modes of transportation. The project site is within a Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas Priority Development Area (PDA). PDAs are transit-oriented, infill development opportunity areas within existing communities. As described in the General Plan, page LU-7, PDAs are areas where new development will support the day-to-day needs of residents and workers in a pedestrian-friendly environment served by transit. The project site is also a qualifying Transit Priority Area or TPA, which is an area within one-half mile of a major transit stop. The overarching goal of developing a high-density, mixed use development within a PDA and a TPA, under both the proposed project and Increased Senior Housing Alternative, is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle and vehicle miles traveled. As shown in Table 5-6, vehicle miles traveled would decrease under the Increased Senior Housing Alternative.

TABLE 5-6 VEHICLE MILES TRAVELED COMPARISON

	Total Annual VMT	Total Daily VMT
Existing Conditions	2,782,747	7,624
Proposed Project	2,663,868	7,298
Net Change from Existing Conditions to the Proposed Project	**118,879**	**326**
Increased Senior Housing Alternative	2,352,587	6,445
Net Change from Existing Conditions to the Proposed Alternative	**430,160**	**1,179**
Net Change between the Proposed Project and the Proposed Alternative	***-311,281***	***-853***

Sources: Kimley-Horn and Associates, Hexagon Transportation Consultants, PlaceWorks, 2019, 2020.

Furthermore, the Increased Senior Housing Alternative, similar to the proposed project, would install a Class I Bike Path on the project site, public access easements on the northwest and southwest corners of the project site to accommodate the bridge over SR-85 connecting Mary Avenue to Alhambra Avenue, and off-site improvements including the installation of a Class IV separated bikeway and a signal control to be activated by bicyclists and pedestrians for the westbound right-turn movement northbound SR-85 on ramp consistent with the 2016 *Bicycle Transportation Plan*, as well as a bus stop on the section of Stevens Creek Boulevard west of Mary Avenue and east of the SR-85 northbound ramp. Accordingly, transportation impacts under the Increased Senior Housing Alternative would be ***less*** than the project and impacts would be less than significant without mitigation measures.

5.8.1.9 Utilities and Service Systems

The impacts related to utilities and service systems of the proposed project are fully mitigable with implementation of Mitigation Measure UTIL-1. Based on the capacity of the sanitary sewer system, any new development may result in a determination by the wastewater treatment provider, that it does not have capacity to serve the project's projected demand in addition to the provider's existing commitment. Under the Increased Senior Housing Alternative, utility demand from new development on the project site would be similar to the proposed project with respect to the townhouses, rowhouses, and the Residential-Retail Building 2. As demonstrated in Table 5-7 below, the additional 140 assisted living units, 27 life guidance units, and alterations to the first floor plan of Residential-Retail Building 1 under the Increased Senior Housing Alternative would generate more wastewater than the 154 market rate units and 17,600 square feet of retail space under the proposed project.

Operation of the proposed project and the Increased Senior Housing Alternative would exceed the 13.8 mgd contractual limit through the City of Santa Clara sewer system resulting in a potentially significant impact. The same mitigation applied to the proposed project would apply to this alternative. Mitigation Measure UTIL-1 states that no building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The Mitigation Measure UTIL-1 requires that the project applicant demonstrates, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system. Therefore, wastewater generation under this alternative would be ***greater*** compared to the proposed project, but with implementation of Mitigation Measure UTIL-1 would remain less-than-significant.

TABLE 5-7 WASTEWATER GENERATION COMPARISON

	Gallons per Day	Million Gallons per Day
Oaks Shopping Center	4,421	0.004
Proposed Project	35,833	0.036
Net Change from Existing Conditions and Proposed Project	**31,412**	**0.032**
Increased Senior Housing Alternative	41,106	0.041
Net Change from Existing Conditions and Proposed Alternative	**36,685**	**0.037**
Net Change between the Proposed Project and the Proposed Alterative	*5,273*	*0.005*

Notes: gallons per day = gpd

a. Wastewater generation is based on the Increased Senior Housing Alternative including 1091 units (39 senior units and 140 assisted living), 253 residents in the townhomes and rowhouses, 8,040 square feet of retail space, 27 life guidance units, and 2,140 square feet of medical office. According to the CSD's December 2019 flow modeling, wastewater is calculated for multi-family units at 133 gpd per multifamily unit, townhomes and rowhouses at 55 gpd per person, retail as 0.073 gpd per square foot, and convalescent home as 63.2 gpd per unit. The CSD's December 2019 flow modeling did not account for medical uses. Wastewater was calculated for medical uses at 0.51 gpd per square foot of medical use consistent with the rates applied in the certified EIR for The Forum Senior Community Update (State Clearinghouse # 2017052037). Therefore, wastewater generation was calculated as follows: (179 x 133 = 23,807) + (253 x 55 = 13,915) + (8,040 x 0.073 = 587) + (27 x 63.2 = 1,706) + (2,140 x 0.51 = 1,091) = 41,106 gpd.

Source: Mark Thomas & Co. Inc., Cupertino Sanitary District, December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara;* PlaceWorks, 2020.

5.8.3 Ability of the Increased Senior Housing Alternative to Accomplish the Project Objectives

Although development proposed under the Increased Senior Housing Alternative would result in accommodations for a greater number of assisted living and life guidance residents than the proposed project, the project site would be redeveloped in a similar manner to the proposed project. Similar to the proposed project, this alternative would: redevelop an existing retail and office complex with desirable amenities and housing; help the City meet the RHNA allocation for 2014-2022; enhance the vibrancy of Cupertino's Heart of the City as a key mixed-use corridor by providing a pedestrian-friendly community that includes housing, open space and greenery, and neighborhood retail; provide senior housing in close proximity to the Cupertino Senior Citizen Center; create a prominent gateway development that incorporates quality architectural design and materials, open space, and artwork to announce entry into Cupertino's Heart of the City; create a mixed-use development that places residential and commercial uses in close proximity to each other, and close to transit options; and help the City to achieve its affordable housing goals through the inclusion of senior housing units within a residential and mixed-use development project. The Increased Senior Housing Alternative would meet all of the proposed project objectives; however, it would not provide as much neighborhood serving retail on the project site as the proposed project.

Section 5.8, Environmentally Superior Alternative, on page 5-17 of the Draft EIR is hereby amended as follows:

5.~~8~~ 9 Environmentally Superior Alternative

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the State CEQA Guidelines requires that an "environmentally superior" alternative, other than the no project alternative, to be identified. The environmentally superior alternative is the alternative that would result in the least environmental impacts.

As shown in Table 5-1, the Reduced Retail Development Alternative would not result in any impacts than are greater than the proposed project, and would reduce impacts related to cultural resources, geology and soils, and utilities and services systems compared to the proposed project. Impacts related to air quality, biological resources, GHG emissions, hazards and hazardous materials, noise, and transportation would be similar to the proposed project. Therefore, the Reduced Retail Development Alternative would be the environmentally superior alternative.

4. List of Commenters

Comments on the Draft EIR were received from the following agencies and service providers, and private individuals and organizations. Oral comments were also received at the Public Meeting to provide comments on the Draft EIR that was held at the Cupertino Senior Center meeting on Wednesday, December 11, 2019, from 6:30 to 8:30 p.m. Each comment letter and comment has been assigned a letter and a number as indicated below. The comments are organized and categorized by:

- A = Agencies and Service Providers
- B = Private Individuals and Organizations
- C = Comments Received at the Public Meeting

4.1 AGENCIES AND SERVICE PROVIDERS

A1 Zachary Chop, Associate Transportation Planner, Caltrans District 4, December 2, 2019
A2 Isabella Roman, Environmental Scientist, Department of Toxic Substances Control, December 18, 2019
A3 Benjamin T. Porter, District Manager-Engineer, Cupertino Sanitary District, December 18, 2019

4.2 PRIVATE INDIVIDUALS AND ORGANIZATIONS

B1 Joseph Hauser, November 25, 2019
B2 Kent Vincent, November 25, 2019
B3 Harris Au, December 5, 2019
B4 Lee Xu, December 11, 2019
B5 Aaron Messing, December 20, 2019
B6 Michelle Dunn, December 23, 2019

4.3 COMMENTS RECEIVED AT THE PUBLIC MEETING

C1 Summary of Comments Received at the Public Meeting

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5. Comments and Responses

This chapter includes a reproduction of, and responses to, each significant environmental issue raised during the public review period. Comments are presented in their original format in Appendix A, Comment Letters, of this Response to Comments document, along with annotations that identify each comment number. Comment letters in this chapter follow the same order as listed in Chapter 4, List of Commenters, of this Response to Comments Document. The comments are organized and categorized by:

- A = Agencies and Service Providers
- B = Private Individuals and Organizations
- C = Comments Received at the Public Meeting

Responses to those individual comments are provided in this chapter alongside the text of each corresponding comment. Letters are identified by category and each comment is labeled with the comment reference number in the margin. Where the same comment has been made more than once, a response may direct the reader to another numbered comment and response. Where a response includes revisions to in the text of the Draft Environmental Impact Report (EIR), these revisions are explained and shown in Chapter 3, Revisions to the Draft EIR, of this Response to Comments Document. Responses to individual comments are presented in Table 5-1, below.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
Agencies and Service Providers		
A1 Zachary Chop, Associate Transportation Planner, Caltrans District 4, December 2, 2019		
A1-1	The Department of Transportation (Caltrans) thanks the City of Cupertino for the opportunity to provide input in the environmental review process. We have reviewed the Westport Mixed Use Project DEIR and we would like to provide additional comments below: In addition to the encroachment permit requirement, a Maintenance Agreement will also be required for landscaping installed in our ROW. Additionally, a tree within our ROW is marked for removal, this would require prior approval from the District Landscape Architect.	The comment serves as an opening remark and identifies additional approvals required by Caltrans. The project applicant would be required to comply with all applicable federal, State and local regulations, including a Maintenance Agreement and tree removal approvals in the Caltrans right-of-way (ROW) as necessary. The City will require the applicant to comply with all applicable regulations of Caltrans and other responsible agencies. The following addition to Chapter 3, Project Description, of the Draft EIR has been made in Chapter 3 of this Response to Comments document. This revision acknowledges the additional approvals required by Caltrans. The revision is as follows: Encroachment permits from the City and Caltrans would also be required as well as design review and approval for the proposed bus stop by the VTA. Additionally, Caltrans would require a Maintenance Agreement for any proposed landscaping installed in the Caltrans right of way (ROW) and any trees in the Caltrans ROW would require prior approval from the Caltrans District Landscape Architect. This revision does not affect any conclusions or significance determinations in the Draft EIR.
A2 Isabella Roman, Environmental Scientist, Department of Toxic Substances Control, December 18, 2019		
A2-1	I represent a responsible agency reviewing the Draft EIR for the Westport Mixed-Use Project. I see that two Phase 1 Environmental Site Assessments (ESAs) and a Limited Environmental Site Characterization (ESC) were prepared for the Site. Phase 1 ESAs don't typically present characterization data and the ESC compares soil data against hazardous waste criteria for the purposes of soil disposal. I would recommend collecting additional samples for the purposes of characterizing site media for	As stated on page 52 of the Initial Study that was prepared for the project and included in Appendix A of the Draft EIR, two Phase 1 Environmental Site Assessments (ESAs), dated March 14, 2007 and September 18, 2015, were prepared for the project site by EBI Consulting and PIERS Environmental Services, respectively. The Phase I ESAs that were prepared did not identify any Recognized Environmental Conditions (RECs) at the project site based on land use history, file review, database searches, and site inspections. The project site is not included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	protection of construction workers and future residents. I would recommend for sampling activities to include soil vapor to eliminate any concerns regarding vapor intrusion.	The site historically was used for agricultural purposes with a residence prior to the development in the 1970s of the current commercial structures. A Limited Environmental Site Characterization (ESC) dated January 28, 2015 was prepared for the project site by Langan Treadwell Rollo to characterize soil, if soil was going to be exported from the site, and to assess for potential soil contamination. Soil samples were collected at approximate depths of 2.5, 5.0, 8.0, 10.0, 15.0, and 17.0 feet below ground surface. The soil samples were analyzed for some or all of the following: ▪ total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) ▪ volatile organic compounds (VOCs) ▪ semi-volatile organic compounds (SVOCs) ▪ organochlorine pesticides (OCPs) ▪ polychlorinated biphenyls (PCBs) ▪ California assessment metals (CAM) (17 metals) ▪ leaking underground fuel tank (LUFT) (5 metals) No VOCs, SVOCs, PCBs, or OCPs were detected above laboratory reporting limits in any of the samples analyzed. TPHd was detected at or above the laboratory reporting limit (1 milligram per kilogram (mg/kg)) in two of the 12 samples analyzed at concentrations of 1.2 mg/kg and 4.4 mg/kg but below the United States Environmental Protection Agency's (USEPAs) Region 9 (Pacific Southwest) Regional Screening Levels or RSLs. TPHmo was detected at or above the laboratory reporting limit (5 mg/kg) in two of the 12 samples analyzed at concentrations of 8.2 mg/kg and 17 mg/kg, but below the USEPA Region 9 RSLs. TPHg was not detected above the laboratory reporting limit (1 mg/kg) in any of the 12 samples analyzed. Lead was detected at concentrations ranging from 3.9 mg/kg to 17 mg/kg, which are all below the California Department of Toxic Substances Control screening level of 80 mg/kg for residential land use. Arsenic concentrations ranged from 3.4 mg/kg to 8.1 mg/kg, which are within typical background concentrations. The ESC concluded that no contaminated or hazardous materials were encountered at the site. The Phase I ESA prepared in 2015 by PIERS Environmental Services also included a vapor encroachment screening (VES) which did not identify any sites with VOCs within the critical distance cited in the American Society for Testing and Materials (ASTM) VES guidance document. Vapor intrusion was determined to not be an issue for the site. Accordingly, no additional samples are required.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
A2-2	HAZ-2 refers to AQ-3 to discuss impacts to nearby schools. Only diesel particulate matter (DPM) is considered as an emission that would have the potential to impact nearby schools. Project construction would disrupt the soil and could potentially migrate to nearby schools. This should be acknowledged as well within the HAZ-2 discussion. I would recommend a dust control and air monitoring plans to be developed to protect construction workers and the nearby schools.	As stated in Response to Comment A2-1, the two Phase I ESAs and the Limited ESC prepared for the site did not identify any RECs and no chemicals of concern were found in soil at the site. Normal dust control best management practices required in Mitigation Measure AQ-2 (please see pages 4.1-18 and 4.1-19 in Chapter 4.1, Air Quality, of the Draft EIR) are adequate for the project site since no chemicals of concern or RECs were identified. With respect to the commenters request that impact discussion HAZ-3 acknowledge fugitive dust during construction, revisions to Chapter 4.6, Hazards and Hazardous Materials, of the Draft EIR have been made in Chapter 3 of this Response to Comments document. These revisions acknowledge that Mitigation Measure AQ-2 would reduce adverse impacts to nearby schools from fugitive dust generated during the construction phase. The revisions are as follows: De Anza College is located directly south of Stevens Creek Boulevard, within 140 feet of the project site. In addition, one pre-school is located within 0.25-miles of the project site. As described under impact discussion HAZ-1, impacts related to potentially contaminated soils would be less than significant. Also see Chapter 4.1, Air Quality, impact discussion AQ-2 and AQ-3, which concludes that the potential for impacts to sensitive receptors due the release of fugitive dust during construction would be less than significant with implementation of Mitigation Measure AQ-2 and the release of hazardous materials during construction would be less than significant without mitigation, respectively. Therefore, the proposed project would not emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school, and impacts would be *less than significant*. These revisions do not affect any conclusions or significance determinations in the Draft EIR. It is also acknowledged that Mitigation Measure AQ-2 would reduce impacts to on-site construction workers from fugitive dust generated during the construction

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		phase. However, impact discussion HAZ-3 is related to impacts to schools within 0.25 miles of the project site; therefore, no discussion of on-site construction workers is appropriate in this discussion.
A3 Benjamin T. Porter, District Manager-Engineer, Cupertino Sanitary District, December 18, 2019		
A3-1	The Cupertino Sanitary District has reviewed the Draft Environmental Impact Report (DEIR) for the Westport Mixed-Use Project. The following comments are provided for your review, incorporation of our comments, and to update the DEIR to produce the Final EIR.	The comment serves as an opening remark. No response is required. Note that the commenter uses both CuSD and CSD to identity the Cupertino Sanitary District.
A3-2	Mitigation Measure UTIL-1: The statement that reads "The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient table in the May 2007, City of Santa Clara Sanitary Sewer Capacity" is not accurate for estimating peak wet weather flow. These generation rates are used to calculate average flow to the treatment plant. Based on CSD model, peak wet weather flow for a 10-year storm event over average dry flow is 2.95 times the average.	Revisions to Chapter 4.9, Utilities and Service Systems, of the Draft EIR have been made in Chapter 3 of this Response to Comments document. These revisions acknowledge the updated generation rates in the CSD's *Flow Modeling Analysis for Homestead Flume Outfall to City of Santa Clara* published December 6, 2019 after the release of the Draft EIR and provided as an attachment to the CSD comment letter dated December 18, 2019. The revisions to Mitigation Measure UTIL-1 are as follows: **Mitigation Measure UTIL-1:** No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods: 1) Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or 2) Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the ~~*San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient* table in the May 2007, *City of Santa Clara Sanitary Sewer Capacity Assessment*,[19] and *California Green Building Standards*,~~ CSD in the *Flow Modeling Analysis for the Homestead Flume Outfall to the City of Santa Clara*, prepared by Mark Thomas & Co. Inc. dated December 6, 2019, unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD. To calculate the peak wet weather flow for a 10-year storm event, the average daily flow rate shall be multiplied by a factor of 2.95 as required by CSD pursuant to their December 2019 flow modeling analysis. Footnote: ~~[19] Mark Thomas and Associates, July 19, 2018, Email communication with Cupertino Public Works.~~ These revisions do not affect any conclusions or significance determinations in the Draft EIR.
A3-3	It is also very unlikely that CSD will have an agreement to increase our 13.8 mgd permitted peak flow in the foreseeable future.	The comment is acknowledged.
A3-4	Mitigation Measure UTIL-2: Same response comments as UTIL-1.	Impact UTIL-2 (cumulative impacts) refers to Mitigation Measure UTIL-1. Please see Response to Comment A3-2.
A3-5	3.4.1.8 Utilities and Service Connections: Wastewater Please add to last sentence in first paragraph - which discharges through City of Santa Clara joint usage interceptor. Please recalculate the new flow using the most recent data available: single family at 175 gpd; multi-family units at 133 gpd; retail at 0.073 gsf, and townhomes at 55 gallon per person. Please note that the rates are average. To get the peak flow in a pipe system, please multiply average by 2.95 factor.	The Draft EIR relied on the most current information at the time of issuance of the Notice of Preparation (NOP) on July 11, 2019, which is normally the baseline for purposes of determining whether impacts are significant. The commenter provided the *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019 as an attachment to their comment letter dated December 18, 2019. This recent flow modeling analysis was published following the circulation of the NOP. The City acknowledges this recent flow modeling analysis and has revised the Draft EIR to be consistent with this recent flow modeling analysis as well as other comments submitted by the CSD. Please see Chapter 3 of this Response to Comments document for the complete revisions.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		Pursuant to this comment, revisions to Chapter 3, Project Description, and Chapter 4.9, Utilities and Service Systems, of the Draft EIR have been made in Chapter 3 of this Response to Comments document. These revisions acknowledge the updated generation rates for average dry flow and the peak wet weather flow generation multiplier in the recent flow modeling analysis. The revisions are as follows: **Chapter 3, Project Description:** **Section 3.4.1.8 Utilities and Service Connections** **Wastewater** Based on the ~~2007 *City of Santa Clara Sewer Capacity Assessment*~~ CSD's *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019, the estimated ~~wastewater~~ average dry weather flow (ADWF) generation rate for multi-family residential uses is 133 gallons per day (gpd) per unit, 55 gpd per person per townhome (or rowhouse), and 0.073 gpd per square foot of retail space. The proposed 242 residential units are comprised of 154 multi-family units and 88 townhomes. Based on an average household size of 2.87 persons,[33] the townhomes would generate 253 new residents. The proposed project also includes 20,000 square feet of retail space. Applying ~~this~~ these generation rates, the proposed ~~242 residential units and 20,000 square feet of retail space would generate up to 38,186 gpd or approximately 0.0382 mgpd of wastewater~~ project would generate approximately 35,833 gpd or 0.036 mgd of ADWF. The approximately 71,250 square-foot shopping center is currently 85 percent occupied (or 60,560 square feet). The shopping center currently, generates an ADWF of about ~~21,376~~4,421 gpd or ~~0.0213~~ 0.004 mgd. Therefore, the net increase in ADWF for the proposed project is ~~16,810~~31,412 gpd or ~~0.016~~ 0.031 mgd.[33] According to Benjamin T. Porter, Cupertino Sanitary District Manager-Engineer, in a letter to the City of Cupertino dated December 18, 2019, the peak wet weather flow is calculated by multiplying the average dry flow by a factor of 2.95. The peak wet weather flow for the proposed project is 105,707 gpd or 0.105 mgd. The operational shopping center currently generates about 13,042 gpd or 0.0013 mgd of peak wet weather flow. Therefore, the net

TABLE 5-1 RESPONSE TO COMMENTS

Comment # Comment Response

increase in peak wet weather flow for the proposed project is 92,665 gpd or 0.093 mgd.

Footnotes:

[33] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 projections of the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino.

[34] ~~38,186~~ 35,833 gpd proposed generation – ~~21,376~~ 4,421 gpd existing generation = ~~16,810~~ 31,412 gpd (or ~~0.0168~~ 0.031 mgd) net increase.

Chapter 4.9, Utilities and Service Systems
Section 4.9.2.2 Existing On-Site Uses

The project site is currently occupied by an approximately 71,250 square-foot shopping center that is currently in operation at 85 percent occupancy (or 60,560 square feet). Based on the ~~May 2007 *City of Santa Clara Sewer Capacity Assessment* and~~ CSD's *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019, the estimated ~~wastewater~~ ADWF generation rate is 0.073 gpd per square foot of retail space. Therefore, the existing uses generate an ADWF of approximately ~~21,376~~4,421 gallons per day (gpd) or ~~0.0213~~ 0.004 ~~million gallons per day (~~mgd~~)~~. According to the CSD, the peak wet weather flow is calculated by multiplying the ADWF by a factor of 2.95. Therefore, the peak wet weather flow is 13,042 gpd or 0.013 mgd.[6]

Footnote:

[6] ~~71,250 sf retail x 0.3 gpd per square foot = 21,376 gpd or 0.0213 mgd~~ Mark Thomas & Co., Inc., Benjamin T. Porter, Cupertino Sanitary District Manager-Engineer, December 18, 2019, letter submitted to Gian Martire, Senior Planner, City of Cupertino, commenting on the November 2019 Draft EIR; 60,560 square feet of retail x 0.073 gpd per square foot = 4,421 gpd or 0.004 mgd average daily flow. 4,421 gpd average daily flow x 2.95 = 13,042 gpd or 0.013 mgd peak daily flow.

Impact Discussion UTIL-1

Based on the ~~May 2007 *City of Santa Clara Sewer Capacity Assessment*~~ CSD's *Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara* dated December 6, 2019, the estimated ~~wastewater~~ average dry weather flow (ADWF) generation rate for multi-family residential uses is 133 gallons per day

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		(gpd) per unit, 55 gpd per person per townhome (or rowhouse), and 0.073 gpd per square foot of retail space. The proposed 242 residential units are comprised of 154 multi-family units and 88 townhomes. Based on an average household size of 2.87 persons,[7] the townhomes would generate 253 new residents. The proposed project also includes 20,000 square feet of retail space. Applying ~~this~~ these generation rates, the proposed ~~242 residential units and 20,000 square feet of retail space would generate up to 38,186 gpd or approximately 0.0382 mgpd of wastewater~~ project would generate approximately 35,833 gpd or 0.036 mgd of ADWF. Applying the CSD's peak wet weather flow generation rate (the ADWF multiplied by a factor of 2.95), the peak wet weather flow for the proposed project would be 105,707 gpd or 0.106 mgd.[8] As described in Section 4.9.2.2, Existing On-Site Uses, the operational shopping center currently generates ~~about 21,376 gpd or 0.0213 mgd~~ an ADWF of 4,421 gpd or 0.004 mgd and about 13,042 gpd or 0.013 mgd of peak wet weather flow. Therefore, the net increase for the proposed project ~~is 16,810 gpd or 0.0168 mgd~~ would be 31,412 gpd or 0.031 mgd ADWF and 92,665 gpd or 0.093 mgd peak wet weather flow.[9] Footnotes: [7] This analysis is based on the Association of Bay Area Governments (ABAG) 2019 projections of the average household size of 2.87 persons for Cupertino in 2025. This is the standard approach for population and housing analysis in Cupertino. [8] (~~242~~ 154 units x 133 gpd = ~~32,186~~20,482 gpd) + (88 townhomes x 55 gpd per person x 2.87 persons/household = 13,891 gpd) + (20,000 sf retail x 0.073 gpd per square foot = ~~6,000~~1,460 gpd) = ~~38,186~~35,833 gpd average dry weather flow; 35,833 gpd average dry weather flow x 2.95 = 105,707 gpd or 0.106 mgd of peak wet weather flow. [9] average dry weather flow: ~~186~~ 35,833 gpd proposed generation – ~~21,376~~4,421 gpd existing generation = ~~16,810~~ 31,412 gpd (or ~~0.0168~~ 0.031 mgd) net increase. peak wet weather flow: 79,007 gpd proposed generation – 13,042 gpd existing generation = 65,965 gpd (0.066 mgd) net increase.
		These revisions do not affect any conclusions or significance determinations in the Draft EIR.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
A3-6	4.9.2.1 and 4.9.2.2 Cupertino Sanitary District In the last paragraph, which states 13.29 mgd. Please see most recent flow report. Please update this using the attached report. Also, for the existing condition, please update using the attached flow report. Also, indicate whether the reference is to average or peak.	Please see Response to Comment A3-5 for revisions to the existing conditions that have been made to reflect the new generation rates provided by the commenter and clarify average flow from peak wet weather flow. Revisions to Chapter 4.9, Utilities and Service Systems, of the Draft EIR have been made in Chapter 3 of this Response to Comments document. These revisions acknowledge the updated generation rates in the CSD's *Flow Modeling Analysis for Homestead Flume Outfall to City of Santa Clara* published December 6, 2019 (provided as an attachment to this comment letter). The revisions are as follows: **Section 4.9.2.1, Cupertino Sanitary District:** The CSD wastewater system also flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara is 13.8 mgd during peak wet weather flows. The existing CSD peak wet weather flow into the Santa Clara system is modeled at ~~13.29~~13.14 mgd.[4] Footnote: [4] Mark Thomas & Co. Inc., Cupertino Sanitary District, ~~February 20~~December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara*. These revisions do not affect any conclusions or significance determinations in the Draft EIR.
A3-7	4.9.4 UTIL-1 Impact Discussion Please update flows based on the attached report. Also, please separate impact discussion at the wastewater treatment facility and joint capacity issue through the City of Santa Clara. For the wastewater treatment facility, CuSD has 7.85 mgd capacity, which cannot be exceeded regardless of what the total treatment plant capacity is. CuSD does not anticipate an issue with the treatment plant capacity of 7.85 mgd through the City of Cupertino General Plan built-out, but expects capacity issues through the City of Santa Clara. Also, please verify 450 mgd capacity at the treatment plant is correct.	Please see Response to Comment A3-5 for revisions to the existing conditions and the proposed project that have been made to reflect the new generation rates in the attached report provided by the commenter. Revisions to Chapter 4.9, Utilities and Service Systems, of the Draft EIR have been made in Chapter 3 of this Response to Comments document. Sub-headings have been added to separate the discussion related to the wastewater treatment plant capacity and the sewer system capacity, and the discussion now states that the proposed project would cause no impact to the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP).

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		The projected peak wet weather capacity stated in *The San Jose Santa Clara Water Pollution Control Plant Master Plan*, November 2013, is 450 mgd (see page 15). The average dry weather flow or ADWF capacity is 167 mgd pursuant to the most recent National Pollutant Discharge Elimination System (NPDES) permit for the SJ/SCWPCP (Order No. R2-2014-0034, NODES No. CA0037842). The revisions to impact discussion UTIL-1 are as follows: *Wastewater Treatment Capacity* The ADWF consists of average daily sewage flows and any groundwater that infiltrates sewer pipeline and manhole defects located below the ground surface. The SJ/SCWPCP currently has a total ADWF capacity of ~~450~~167 mgd.[9] Combined, the proposed project's net increase of ~~wastewater generation of 0.0168~~ 0.031 mgd ADWF and the current wastewater generated system-wide of ~~105~~ 110 mgd of ADWF, the proposed project would not exceed the SJ/SCWPCP's current total capacity of ~~450~~ 167 mgd for ADWF. The CSD has a contractual treatment allocation of 7.85 mgd ~~Average Daily Dry Flow~~ ADWF with the SJ/SCWPCP. At the time of the General Plan EIR, the wastewater generation of 5.3 mgd was estimated by the CSD.~~8~~[10] The existing wastewater flow of 5.3 mgd plus the proposed project's ~~wastewater~~ ADWF of ~~0.0168~~ 0.031 mgd would not exceed the City's contractual allocation limit of 7.85 mgd. The proposed project is also within the amount of development (4,421 residential units and 1,343,679 commercial square feet) evaluated in the General Plan EIR;~~9~~[11] therefore, no impact would result. Sewer System Capacity The CSD wastewater system flows through a portion of the City of Santa Clara's sewer system. The contractual agreement between CSD and the City of Santa Clara allows 13.8 mgd during peak wet weather flows for this portion of the Santa Clara sewer system.[13] The existing CSD peak wet weather flow into the

COMMENTS AND RESPONSES

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		Santa Clara system is ~~13.29~~ 13.14 mgd.~~[10]~~[13] However, the estimated wastewater generation from the proposed project and from other potential projects, as established by the General Plan and other approved projects, is approximately ~~14.25~~ 14.61 mgd, which is the total capacity needed to serve the General Plan buildout.~~[11]~~[14] Therefore, the proposed project, and other approved and potential projects as established by the General Plan 2040 buildout, will require a reduction in sewer generation from the CSD system prior to flowing into the City of Santa Clara system, or additional capacity rights will need to be acquired from the City of Santa Clara. ~~CSD performed smoke testing[12] on a portion of the sewer system in 2018. The results of the smoke testing showed that certain portions of their system are being impacted by inflow from illegal connections to the system. These illegal connections include area drains, catch basins, and roof rainwater leaders from both public and private facilities within the cities of Cupertino and Saratoga jurisdictions. These illegal connections collect storm water and direct the flow to the sewer system. Calculating the flows from these illegal connections, using the Manning's flow equation[13] and the size of the areas that flow to these connections, there is an addition of approximately 0.4 mgd to the sanitary sewer peak wet weather flow. Disconnecting these illegal connections and redirecting these storm water flows to the public storm drain system would result in a reduction of the sewer peak wet weather from 14.25 mgd to 13.85 mgd. Further investigation of the CSD system is anticipated and disconnection of additional illicit connects is expected, which would provide further potential reduction to the peak wet weather flow.~~ ~~However, until such corrections to the system can occur,~~ Therefore, the operation of the proposed project would exceed the 13.8 mgd contractual limit through the City of Santa Clara sewer system resulting in a potentially significant impact. Footnotes:

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		[9] The San Jose Santa Clara Water Pollution Control Plant Master Plan, November 2013, page 15; San Francisco Bay Regional Water Quality Board, September 10, 2014, Order No. R2-2014-0034 NPDES No. CA0037842; City of San Jose Environmental Services, https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility, accessed January 2, 2020. [~~8~~10] City of Cupertino, General Plan (Community Vision 2015–2040), Appendix B: Housing Element Technical Report, 4.3 Environmental, Infrastructure & Public Service Constraints, page B-93. [~~9~~11] City of Cupertino, certified General Plan Amendment, Housing Element Update, and Associated Rezoning EIR, (December 2014) and approved General Plan Amendment, Housing Element Update, and Associated Rezoning EIR Final Addendum, State Clearinghouse Number 2014032007 (October 2015). [12] Peak wet weather flow consists of the average dry weather flow or ADWF in addition to infiltration and inflow. Infiltration is rainfall that enters the sewer system through manhole defects. Inflow is rainfall that enters the sewer system through illegal connections, such as catch basins, downspouts, area drains and manhole covers. Peak wet weather flow is the highest measured hourly flow that occurs during wet weather. [~~10~~13] Mark Thomas & Co. Inc., ~~August 29, 2019~~ December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara*. [~~11~~14] Mark Thomas & Co. Inc., ~~August 29, 2019~~ December 6, 2019, *Cupertino Sanitary District Flow Modeling Analysis Homestead Flume Outfall to City of Santa Clara.*~~Sewage coefficients use to calculate the sewer generation rates for the various uses in the project and the General Plan buildout were taken from the San Jose - Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient table and from the City of Santa Clara Sanitary Sewer Capacity Assessment, May 2007, as well as CSD estimated flow rates based on measured water usages.~~ Please see Response to Comment A3-2 for the revisions to Mitigation Measure UTIL-1. These revisions do not affect any conclusions or significance determinations in the Draft EIR.
A3-8	The statement that reduction of the peak wet weather flow from 14.25 mgd to 13.85 mgd by removal of illegal connections is incorrect. The District has not fully evaluated options to reduce I/I and does not expect it to be completed in the near future.	Revisions to Chapter 4.9, Utilities and Service Systems, of the Draft EIR have been made in Chapter 3 of this Response to Comments document. These revisions acknowledge the updated generation rates in the CSD's *Flow Modeling Analysis for Homestead Flume Outfall to City of Santa Clara* published December 6, 2019 (provided as an attachment to this letter). The discussion relating to illegal connections has been removed from the impact analysis. Please see Response to Comment A3-7.

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TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		These revisions do not affect any conclusions or significance determinations in the Draft EIR.
Attachment A3-1	A copy of the Cupertino Sanitary District's *Flow Modeling Analysis for Homestead Flume Outfall to City of Santa Clara* published December 6, 2019.	The attachment to the comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Final EIR for their consideration in reviewing the project.
Private Individuals and Organizations		
B1 Joseph Hauser, November 25, 2019		
B1-1	Please add this email to the public record for the Westport Project As I cannot attend the proposed Westport Cupertino Project Development meetings, I would like to present several comments.	The comment serves as an opening remark. No response is required.
B1-2	The project, being on Stevens Creek between Mary Ave and the entrance to 85/280 will negatively impact access to the main corridor toward the city center. This potentially impacts access to all the businesses along Stevens Creek Blvd.	The commenter expresses an opinion about the potential impacts of the proposed project on the roadways in the vicinity of the project site and asserts that there will be negative impacts related to access to the city center and to all business on Stevens Creek Boulevard. The commenter provides no evidence to support this assertion. Transportation impacts resulting from the proposed project are discussed in Chapter 4.8, Transportation, of the Draft EIR beginning on page 4.8.15. As discussed in Chapter 4.8, construction and operation of the proposed project would not result in any significant transportation impacts on Stevens Creek Boulevard.
B1-3	The area surrounding the proposed project is already a highly-impacted area for the following activities. a The main entrance to De Anza College b Cupertino Senior Citizens Center c The main entrance to Memorial Park where there are numerous city events each year d Entrance to two major highways (85 and 280) e Access to the city yard facility f Access to the city dog park g Access to over 300 residential homes h Access to a condo complex i Access to the Glenbrook Apartments	The commenter expresses an opinion about the existing conditions in the project vicinity. The commenter's observations are noted.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	j Bicycle path to the Mary Avenue Bridge	
B1-4	The state Density Bonus Law allows this project 3 concessions- not more! They also want to remove protected trees, consolidate all BMR housing into one building, not provide a mix of BMR unit sizes, not provide required amount of retail facing Stevens Creek, etc. This is WAY MORE than 3 concessions. In addition, the height concessions is 100% more than what is allowed. Where is the limit?	This comment expresses an opinion about the proposed project but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The application of Density Bonus regulations is described on page 3-10 of Chapter 3, Project Description, of the Draft EIR. As described in the Project Description, Draft EIR page 3-28, the applicant is requesting density bonus waivers for height, slope setback, and dispersion of affordable units. The applicant has not requested any concessions. The City's regulations for protected trees are described on pages 4.2-3 and 4.2-4 in Chapter 4.2, Biological Resources, of the Draft EIR. As stated in impact discussion BIO-2 starting on page 4.2-11, the removal of protected trees is permitted by the City with approval of a tree removal permit. Implementation of Mitigation Measure BIO-2 would ensure compliance with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18).
B1-5	There is only one other exit area from the area being impacted. Those exits are on to Stelling Ave., and only has a traffic light on Greenleaf and Stelling. Greenleaf has a dangerously sharp S-curve right by Garden Gate Elementary School. The other exits onto Stelling require drivers to try to get onto Stelling when there is a break in the traffic. This is virtually impossible during rush hour. With the additional traffic to be generated by this project, many drivers will find an alternative route through the neighborhood and past Garden Gate School. During rush hour, many parents use Greenleaf to let their children disembark from their cars, or cross streets to the school. This is already dangerous and will only get worse.	The commenter expresses an opinion about the existing conditions in the project vicinity and asserts that the operation of the proposed project will create worse conditions on the roadways in the vicinity of the project site. The commenter provides no substantial evidence to support these assertions. The commenter does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project. As discussed in Chapter 3, Project Description, of the Draft EIR, on page 3-21 the proposed project would provide one access point from Stevens Creek Boulevard and three access points from Mary Avenue.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		According to staff at Hexagon, the transportation consulting firm hired by the city, in response to this comment in February 2020, based on the project site location and existing travel patterns in the area, project-generated trips would exit the site on Mary Avenue and use Stevens Creek Boulevard to access Stelling Road. This is the most logical route. Site access to and from Stelling Road through the adjacent neighborhood to the north is highly unlikely due to the circuitous route, which would require traveling along six different residential streets with a speed limit of 25 miles per hour, traversing multiple intersections with stop signs, and driving past Garden Gate Elementary School on Greenleaf Drive. Furthermore, due to the presence of the elementary school, drivers are more likely to avoid Greenleaf Drive during the peak pick-up and drop-off periods of the school day, because it would cause them further delay. For these reasons, traveling through the neighborhood to the north to access Stelling Road does not offer a practical alternative route from the project site. Note that some future residents of the project may have children that attend Garden Gate Elementary School and, therefore, may travel between the project site and the neighborhood school. However, the number of such trips between the project site and the school would be negligible (likely not noticeable to neighborhood residents) and are not considered cut-through trips because the destination (the school) is located within the neighborhood.
B1-6	The proposed height limitation of this project is not in keeping with height limitations along highway 85 for at least a mile radius.	This comment expresses an opinion about height limits but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.
B1-7	At times the number of cars in the turn lane from Stevens Creek Blvd onto Mary Ave., and the turn lane from Mary onto Stevens Creek Blvd already exceeds the amount of space allocated, thereby causing backups onto regular traffic lanes. This will only get worse.	The commenter expresses an opinion about the existing conditions and speculates about future conditions. The comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		Transportation impacts resulting from the proposed project are discussed in Chapter 4.8, Transportation, of the Draft EIR beginning on page 4.8.15. As discussed in Chapter 4.8 construction and operation of the proposed project would not result in any significant impacts on Stevens Creek Boulevard. The project would have no effect on the operation of the eastbound left-turn pocket on Stevens Creek Boulevard [onto Mary Avenue], because the project would generate zero net new inbound vehicle trips during both the AM and PM peak commute periods of the day. During the AM peak hour, the southbound left-turn movement from Mary Avenue onto eastbound Stevens Creek Boulevard is currently operating at an acceptable level of service (LOS D) and would continue to do so with the addition of project-generated outbound traffic. The project would result in fewer PM peak hour outbound vehicle trips compared to the existing shopping center and, thus, vehicle queues would likely decrease for this movement with the project during the PM peak hour.
B1-8	There are no buildings in this area with heights larger than 2 stories. I hope the city will take these points into consideration. As a longtime resident of Cupertino, I have witnessed the area becoming a traffic nightmare, and city promises to residents' better quality of life being largely ignored so that developers can get their way. I am not against reasonable growth, but this project is massive, and does not fit into the area being allocated. It will not only impact the immediate area, but will impact the entire city. Recent events have indicated that residents are mostly fed up with the type of projects the city has approved. I hope this project will be an example of a new attitude by the city.	The commenter's opinion about two-story building heights in the project area is noted; however, as shown on Figure 3-2 (Aerial of the Project Site) the De Anza College campus is located across Stevens Creek Boulevard from the project site and has buildings that range in height from one to four stories. The commenter does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.
B2 Kent Vincent, November 25, 2019		
B2-1	Cupertino residents recently received notices for hearings on two development proposals each requiring General Plan Amendments: the De Anza Hotel and Westport Cupertino. I want to encourage the	This comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the

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Comment #	Comment	Response
	Council to enforce the City's General Plan when ruling on these and all future development proposals. As you know, General Plans are not intended to be project specific but the blueprint for future development throughout the city. Unfortunately, developers have become accustomed to project-specific GPAs in Cupertino via the actions of prior Councils. Cupertino residents elected a Council majority to end this practice and actively enforce the General Plan. While I know you know this, I just want to give you respectful encouragement noting enforcement has the support of your constituents. I think it is also worth mentioning that freely given project specific GPAs and rezoning encourages property value inflation. Land cost is directly a function of utility and what is, or what is likely to be allowed for development on any given parcel. A Council that holds its ground against GPAs in theory should stabilize land prices so high rise, high density is less of a requirement for development profitability.	record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.
B3 Harris Au, December 5, 2019		
B3-1	The Westport proposal to build 242 residential units is way too many. It is obvious that the resulting traffic congestion will be unbearable. Even today the traffic is very heavy during the morning 7-9 am and 4-6 pm periods. Consider all the traffics from Steven's Creek Blvd, HWY 85 and De Anza college. Besides traffic congestion problems, other issues are in safety for both car and pedestrians, air and noise population, and building height. The maximum number of residential units in Westport is 50.	This comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. Transportation impacts resulting from the proposed project are discussed in Chapter 4.8, Transportation, of the Draft EIR beginning on page 4.8.15. As discussed in Chapter 4.8 construction and operation of the proposed project would not result in any significant impacts for automobiles, transit, pedestrians, or bicyclists. Air quality impacts resulting from the proposed project are discussed in Chapter 4.1, Air Quality, of the Draft EIR beginning on page 4.1-14. As discussed in Chapter 4.1, construction and operation of the proposed project would not result in any significant air quality impacts with implementation of Mitigation Measure AQ-2.

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		Noise impacts resulting from the proposed project are discussed in Chapter 4.7, Noise, of the Draft EIR beginning on page 4.7-11. As discussed in Chapter 4.7, construction and operation of the proposed project would not result in any significant noise impacts with implementation of Mitigation Measure NOISE-1. As described on page 3-1 of Chapter 3, Project Description, of the Draft EIR, the project site is identified as a Priority Housing Element Site A3 in the City of Cupertino General Plan (Community Vision 2015-2040) to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 to 2022 planning period and meet Cupertino's fair-share housing obligation of 1,064 units. The Environmental Impact Report (EIR) for the General Plan Amendment, Housing Element Update, and Associated Rezoning Project, certified in 2015, included an evaluation of the project site with a new mixed-use development including residential uses that could have up to 235 net residential units and maximum height of maximum height of 75 feet. The comment's statement regarding a maximum of 50 units on the site is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.
B4 Lee Xu, December 11, 2019		
B4-1	I am the owner of the house at 21164 Grenola Dr, Cupertino, CA 95014. Thank you for informing me of the Westport project. I think the project adds too many new residential units in this already crowded area. Furthermore, the tall building is not in harmony with the surroundings. I vote against the project.	This comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The commenter's opinion regarding the density, height, and position against project approval is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.
B5 Aaron M. Messing, December 20, 2019		
B5-1	We are writing on behalf of Cupertino Residents for Responsible	The comment serves as an opening remark. No response is required.

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Comment #	Comment	Response
	Development to provide comments on the November 2019 Draft Environmental Impact Report ("DEIR") prepared for the Westport Mixed-Use Project proposed by KT Urban. The Project involves demolishing a one-story shopping center and developing an 8.1-acre site for a mixed-use of residential and retail buildings, totaling 242 residential units and 20,000 square feet of retail space. The Project is located at 21267 Stevens Creek Boulevard, approximately 0.1-.03 miles from the De Anza Transit Center. According to the DEIR, the Project will require the following approvals from the City of Cupertino ("City"): (1) EIR Certification pursuant to the California Environmental Quality Act ("CEQA"); (2) Development Permit (3) Architectural and Site Approval Permit; (4) Use Permit; (5) Subdivision Map Permit; (6) Heart of the City Exception; (7) tree removal permit; and (8) Encroachment permits from the City and Caltrans.	
B5-2	As explained in these comments, the DEIR does not comply with the requirements of CEQA in several respects: First, the DEIR fails to properly analyze and mitigate impacts from air quality and their associated health risks. Specifically, the City failed to properly analyze construction and operational air emissions by underestimating and failing to support their emission projections. As a result, the City failed to disclose, analyze and mitigate a potentially significant health risk that is evident when the DEIR's errors are corrected.	The comment expresses an opinion regarding CEQA and the air quality analysis in the Draft EIR. The commenter asserts that the construction and operational air emissions were underestimated. However, this comment provides no specific information. Please see Responses to Comments B5-8, B5-13, B5-15 through B5-17, B5-20, B5-32 through B5-39, and B5-52.
B5-3	Second, the DEIR fails to properly disclose, analyze, and mitigate Greenhouse Gas ("GHG") emissions. The DEIR's analysis uses an inapplicable threshold of significance in violation of CEQA and relies on several erroneous and unsupported assumptions which underestimate the Project's actual GHG impacts.	The comment expresses an opinion regarding the GHG emissions analysis in the Draft EIR and asserts that the analysis applied an incorrect threshold. Please see Responses to Comments B5-8, B5-13, B5-15 through B5-17, B5-20, B5-32 through B5-44, and B5-52 below, which demonstrate that the commenter's assertion is incorrect.
B5-4	Third, the DEIR fails to properly disclose, analyze, and mitigate the Project's traffic impacts. The City improperly calculates VMT, at odds	The comment expresses an opinion regarding the transportation analysis in the Draft EIR and asserts that the analysis is incorrect. Please see Responses to

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	with the City's own general plan and California's technical guidance on VMT and fails to include traffic analysis from a major nearby construction project.	Comments B5-8, B5-24, B5-25, B5-53, and B5-54 below, which demonstrate that the commenter's assertion is incorrect.
B5-5	For each of these reasons, the City may not approve the Project until a revised environmental review document is prepared and re-circulated for public review and comment. These comments were prepared with the assistance of air quality and GHG experts from Soil Water Air Protection Enterprise ("SWAPE") Matt Hagemann, P.G, C.Hg. and Paul E. Rosenfeld, PhD[1], and traffic and civil engineer Dan Smith[2]. SWAPE and Mr. Smith's comments and curriculum vitae are attached hereto as Exhibits A and B respectively and are fully incorporated herein and submitted to the City herewith. Therefore, the City must separately respond to the technical comments of the experts, in addition to our comments. Footnotes: [1] Exhibit A: A letter from Matt Hagemann and Paul Rosenfeld to Aaron Messing Re: Comments on the Westport Mixed-Use Project (SCH No. 2019070377), December 20, 2019 ("SWAPE comments"). [2] Exhibit B: A letter from Daniel Smith to Aaron Messing Re: Westport Mixed Use Project DEIR (SCH 2019070377), December 20, 2019 ("Smith comments").	As demonstrated in the remaining responses to this comment letter no recirculation of the Draft EIR is required as incorrectly asserted by the commenter. Under CEQA, recirculation of an EIR is only required when the lead agency adds "significant new information" to the EIR after the public comment period but prior to certification. (CEQA Guidelines Section 15088.5(a).) "Significant information" can include changes in the project or environmental setting, as well as additional data or other information, while "significant new information" requiring recirculation can include, for example, a disclosure showing any of the following (Public Resources Code Section 21092.1 and California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15088.5(a)): ▪ A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented. ▪ A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance. ▪ A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it. ▪ The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043.) Recirculation is required only if changes to the draft EIR deprived the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the project. (CEQA Guidelines Section 15088.5(a).) Recirculation is not required

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		where the new information merely clarifies, amplifies, or makes insignificant modifications to an adequate EIR. (CEQA Guidelines Section 15088.5(b).) Under CEQA, the decision as to whether an environmental effect should be considered significant is reserved to the discretion of the Lead Agency based on substantial evidence in the record as a whole. The analysis of the Draft EIR is based on scientific and factual data, which has been reviewed by the Lead Agency and reflects its independent judgment and conclusions. CEQA permits disagreements of opinion with respect to environmental issues addressed in an EIR. As Section 15151 of the CEQA Guidelines states, even "[d]isagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts." Responses to comments provided to Exhibit A and B of the comment letter are provided below in Responses to Comments B5-29 to B5-50 and B5-51 to B5-55, respectively. Because recirculation is not required where new information added to the EIR merely clarifies, amplifies, or makes insignificant modifications in an adequate EIR, and because no significant new information would result from any of the revisions to the portions of the Draft EIR as shown in Chapter 3, Revisions to the Draft EIR, of this Response to Comments Document, no recirculation is required.
B5-6	I. STATEMENT OF INTEREST Cupertino Residents for Responsible Development is an unincorporated association of individuals and labor unions that may be adversely affected by the potential environmental impacts of the Project. The association includes Silicon Valley MEPS and its members and those members' families and other individuals that live, recreate, work and raise their families in Santa Clara County, including in and around the City of Cupertino (collectively "Cupertino Residents"). Cupertino Residents supports the development of mixed-use projects where properly analyzed and carefully planned to minimize impacts on public health and the environment. Mixed-use projects should avoid impacts to air quality, public health, water resources and traffic, and should take all feasible steps to ensure unavoidable impacts are	This comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Response to Comments document for their consideration in reviewing the project.

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	mitigated to the maximum extent feasible. Only by maintaining the highest standards can mixed-use development truly be sustainable. Individual members of Cupertino Residents and the members of the affiliated labor organizations live, work, recreate and raise their families in Santa Clara County, including in and around the City of Cupertino. These members would be directly affected by the Project's environmental and health and safety impacts. Members of Cupertino Residents may also work on the Project itself. Accordingly, these individuals will be first in line to be exposed to any health and safety hazards created by the Project. They each have a personal interest in protecting the Project area from unnecessary, adverse environmental and public health impacts. The organizational members of Cupertino Residents and their members also have an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for businesses to expand in the region, and by making it less desirable for businesses to locate and people to live there. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities. Finally, the organizational members of Cupertino Residents are concerned with projects that can result in serious environmental harm without providing countervailing economic benefits. CEQA provides a balancing process whereby economic benefits are weighed against significant impacts to the environment[3]. It is in this spirit we offer these comments. Footnote:	

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	[3] Pub. Resources Code § 21081(a)(3); Citizens for Sensible Development of Bishop Area v. County of Inyo (1985) 172 Cal.App.3d 151, 171.	
B5-7	II. THE DEIR LACKS SUBSTANTIAL EVIDENCE TO SUPPORT ITS CONCLUSIONS ON SIGNIFICANT IMPACTS AND FAILS TO DISCLOSE, ANALYZE, AND MITIGATE POTENTIALLY SIGNIFICANT IMPACTS CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report (“EIR”) (except in certain limited circumstances).[4] The EIR is the very heart of CEQA.[5] “The foremost principle in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.”[6] CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.[7] “Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR “protects not only the environment but also informed self-government.”[8] The EIR has been described as “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.”[9] Second, CEQA requires public agencies to avoid or reduce environmental damage when “feasible” by requiring “environmentally superior” alternatives and all feasible mitigation measures.[10] The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.”[11] If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable	This comment incorrectly asserts that the Draft EIR lacks substantial evidence to support the conclusions on significant impacts and fails to disclose, analyze, and mitigate potentially significant impacts as demonstrated in the remaining responses to this comment letter. Please see Responses to Comments B5-8 though B5-55 for detailed to responses to this comment letter and attached Exhibits A and B. This comment provides background on CEQA, CEQA Guidelines, and the judicial interpretation of CEQA. No response is necessary.

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	significant effects on the environment are "acceptable due to overriding concerns."[12] While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference."[13] As the courts have explained, "a prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process."[14] Footnotes: [4] See, e.g., PRC § 21100. [5] Dunn-Edwards v. BAAQMD (1992) 9 Cal.App.4th 644, 652. [6] Comtys. for a Better Env' v. Cal. Res. Agency (2002) 103 Cal. App.4th 98, 109 ("CBE v. CRA"). [7] 14 CCR § 15002(a)(1). [8] Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal. 3d 553, 564. [9] Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs. (2001) 91 Cal. App. 4th 1344, 1354 ("Berkeley Jets"); County of Inyo v. Yorty (1973) 32 Cal.App.3d 795, 810. [10] 14 CCR§ 15002(a)(2) and (3); see also Berkeley Jets, 91 Cal.App.4th at 1354; Citizens of Goleta Valley, 52 Cal.3d at 564. [11] 14 CCR §15002(a)(2). [12] PRC § 21081; 14 CCR § 15092(b)(2)(A) & (B). [13] Berkeley Jets, 91 Cal. App. 4th 1344, 1355 (emphasis added), quoting, Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 391 409, fn. 12. [14] Berkeley Jets, 91 Cal.App.4th at 1355; San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 722; Galante Vineyards v. Monterey Peninsula Water Management Dist. (1997) 60 Cal.App.4th 1109, 1117; County of Amador v. El Dorado County Water Agency (1999) 76 Cal.App.4th 931, 946.	
B5-8	A. The Project description does not provide any information on the types of retail the Project will include, which render the DEIR's analysis on Air Quality, GHGs, and VMT incomplete.	The commenter incorrectly asserts that the project description does not provide "any" information on the types of retail that would be provided at the project site if the proposed project were approved.

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	The DEIR states that the Project will contain “two mixed-use buildings” with a combined approximately 20,000 square feet of retail space on their ground levels.[15] Apart from this information, however, no further description or analysis of the future retail component of the Project is provided in the DEIR. An accurate and complete project description is necessary to perform an evaluation of the potential environmental effects of a proposed project.[16] Without a complete project description, the environmental analysis will be impermissibly narrow, thus minimizing the project’s impacts and undercutting public review.[17] The courts have repeatedly held that “an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient [CEQA document].”[18] “Only through an accurate view of the project may affected outsiders and public decision makers balance the proposal’s benefit against its environmental costs.”[19] CEQA Guidelines § 15378 defines “project” to mean “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.”[20] Without any discussion of the types of retail to be included in the Project, key elements that would comprise the Project’s Air Quality, GHG, and Traffic impacts analysis are missing. For example, “[t]he existing shopping plaza, which contains many local serving uses like cheap restaurants, dentists, nail shops, and dance studios, attracts considerably more local trips than a shopping center that has specialty shops that people drive for longer distances to get to. These differences in retail may significantly increase the VMT and GHG impacts of the project, and without more information, the DEIR cannot make reliable conclusions as to those impacts.”[21] While a Project is entitled to some flexibility with implementation of the Project beyond the project description, there is no practical reason why the City does not provide broad categories of retail to be	As described in Chapter 3, Project Description, of the Draft EIR on page 3-7, the project site is in the Oaks Gateway, which is a neighborhood center intended to provide shopping and gathering spaces for local residents. As stated in Chapter 3, Land Use and Planning, of the General Plan, (please see page LU-18) Neighborhood Commercial Centers serve adjacent neighborhoods and provide shopping and gathering places for residents. Retaining and enhancing neighborhood centers within and adjacent to neighborhoods throughout Cupertino supports the City’s goals for walkability, sustainability and creating gathering places for people. On page 3-8 of the Draft EIR it states that within the Commercial/Residential General Plan land use designation, commercial use means retail sales, businesses, limited professional offices, and service establishments with direct contact with customers. While this applies to commercial activities ranging from neighborhood convenience stores to regionally oriented specialty stores, it is clearly stated in the Project Objectives (please see page 3-11 of the Draft EIR) that the proposed project would provide neighborhood retail; therefore, no regionally oriented specialty stores were assumed for the analysis presented in the Draft EIR. Chapter 4.1, Air Quality, of the Draft EIR, also clearly states the proposed project would include neighborhood-serving retail on page 4.1-15. However, the CalEEMod utilizes the same trip length and parameters for non-regional shopping centers as it does for regional shopping centers. Therefore, any differences between regional and non-regional retail land uses would not generate a different VMT or GHG modeling result because the same trip generation rate is used. Where specific generation rates are applied, i.e., employee generation, solid waste, wastewater, trip generation, etc., the impact analysis in the Draft EIR applied the standards for retail uses routinely used by the City and other responsible agencies including the Cupertino Sanitary District and Caltrans (please see pages 3-22, 3,24, and 3-27). As described in Chapter 3 of the Draft EIR (see page 3-9), the project site is with a Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas Priority Development Area (PDA). PDAs are transit-oriented, infill development

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	included in the Project, such that a significantly more accurate rendering of the Project's impacts could be made.[22] The City must include this information in a recirculated DEIR and make adjustments to its air quality, GHG, and traffic analyses accordingly. Footnotes: [15] DEIR, p. 1-1. [16] *See*, *e.g.*, *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376. [17] *See id.* [18] *County of Inyo v. County of Los Angeles* (1977) 71 Cal.App.3d 185, 193. [19] *Id.* at 192-193. [20] 14 CCR § 15378. [21] Smith Comments, p. 1. [22] *See Stopthemillenniumhollywood.com v. City of Los Angeles* (2019) 39 Cal. App. 5th 1 (finding that a project description was insufficient when there were no practical impediments to why the developer could not have provided an accurate, stable, and finite definition of what it intended to build.).	opportunity areas within existing communities. As described in the General Plan (see page LU-7), PDAs are areas where new development will support the day-to-day needs of residents and workers in a pedestrian-friendly environment served by transit. The project site is also a qualifying Transit Priority Area (TPA), which is an area within one-half mile of a major transit stop. As stated on page 3-9 of the Draft EIR, the overarching goal of developing a high-density, mixed use development within a PDA and a TPA is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, vehicle miles traveled (also referred to as "VMT"), and associated greenhouse gas (GHG) emissions reductions. As is common for a proposed project, the precise retail tenant, uses, or specific vendors are not known at this time and are not required in order for the analysis in the Draft EIR to be accurate. On the contrary, as explained below, the trip generation rates and VMT estimates for retail projects are based on the general category of retail uses proposed. See Response to Comment B5-9. Therefore, lack of more specific information in the Draft EIR identifying precise retail uses or tenants does not render the project description and subsequent analysis inadequate, as incorrectly stated by the commenter. The proposed project includes a total of 20,000 square feet of retail uses. As described on page 3-12 of the Draft EIR, Residential-Retail Building 1 would have 17,600 square feet of retail space located at the corner of Stevens Creek Boulevard and Mary Avenue, and Residential-Retail Building 2 would have 2,400 square feet of retail space on the ground level fronting Stevens Creek Boulevard. The size limits of the two retail areas would prohibit the type of retail that people drive for longer distances to get to as the commenter has asserted. The types of retail that attract longer trips are typically large regional chains such as IKEA, Costco, Target, etc., which can range from 100,00 square feet to 300,000 square feet or more. With respect to recirculation, please see Response to Comment B5-5.

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TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
B5-9	B. The DEIR fails to identify, analyze, and mitigate the Project's air quality impacts and associated health risks Under CEQA, lead agencies must consider a project's impacts on air quality, including whether the project will "expose sensitive receptors to substantial pollutant concentrations."[23] The DEIR's air quality analysis relies on emissions calculated with the California Emission Estimator Model ("CalEEMod") 2016.3.2.The model uses site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type to calculate a project's construction and operational emissions. After reviewing the DEIR, SWAPE concluded that "several of the values inputted into the model were not consistent with information disclosed in the DEIR" and that the DEIR incorrectly evaluates diesel particulate matter emissions.[24] As a result, the DEIR completely fails to identify and mitigate against a potentially significant health risk impact resulting from Project emissions. The City must remedy this failure by recirculating a DEIR with the potentially significant impact disclosed, analyzed, and mitigated. Footnotes: [23] CEQA Guidelines, Appendix G, Section III: Air Quality. [24] SWAPE Comments, p. 2.	The comment expresses an opinion regarding the air quality analysis in the Draft EIR and asserts that the construction and operational air emissions were underestimated. Please see Responses to Comments B5-32 through B5-35 with respect to comments about the values that are applied to the CalEEMod air quality model. Also, please see Responses to Comments B5-15 through B5-17 and B5-37 through B5-39, with respect to the health risk impacts of diesel particulate matter (DPM) emissions. With respect to recirculation, please see Response to Comment B5-5.
B5-10	1. The DEIR underestimates air quality impacts In their review, SWAPE determined that at least three inputs from the DEIR's CalEEMod analysis were underestimated and did not reflect disclosed information about the Project from the DEIR. They also determined that certain mitigation measures outlined by the DEIR are unverified and therefore may underestimate the Project's construction and operational emissions. If adjusted, the revised CalEEMod conclusions result in the finding of a potentially significant health risk impact, explained in section II(B)(3).	Please see Responses to Comments B5-32 through B5-34 with respect to the inputs referred to by the commenter. Specifically, see Response to Comment B5-32, which explains that the commenter has misinterpreted the size of the underground parking structure, Response to Comment B5-33, which explains that the commenter has misinterpreted the weekday trips to be the same as weekend trips, and Response to Comment B5-34 with respect to the use of pass-by trips in the model. With respect to the statements regarding the commenter's assertion of unverified mitigation measures, please see Responses to Comments B5-35 and B5-36.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
B5-11	a) Multiple CalEEMod inputs contradict Project estimations from the DEIR SWAPE notes that while the Project proposes to construct a 148,040 square foot parking garage, the DEIR's CalEEMod inputs only include 92,800 square feet of enclosed parking structure, an underestimation of 55,240 square feet.[25] SWAPE also found that the DEIR's CalEEMod transportation assessment underestimates the weekend trip rate by 242 trips based on the DEIR's own estimation of projected daily trips for the Project.[26] Through both of these underestimations, the DEIR underestimates the Project's construction and operational emissions and leads to an inadequate analysis of health impacts. Additionally, SWAPE determined that the pass-by trips expected to occur throughout the Project's operation were double counted by the DEIR's analysis, and therefore, the Project's operational emissions were underestimated.[27] According to Appendix A of the CalEEMod User's Guide, the primary trips utilize the complete trip lengths associated with each trip type category.[28] Diverted trips are assumed to take a slightly different path than a primary trip and are assumed to be 25% of the primary trip lengths. Pass-by trips are assumed to be 0.1 miles in length and are a result of no diversion from the primary route.[29] Here, the DEIR counts the pass-by trips both in its land use analysis *and* in its transportation assessment.[30] And as a result, "the emissions associated with these trips are underestimated and as a result, the Project's mobile-source operational emissions are underestimated."[31] These underestimations are compounded by the DEIR's failure to include any information about the types of retail the Project will contain. As established above, different types of retail could have substantially different implications for the projections of daily trips or of trip purposes, both of which would have air quality impacts. As a result, the Project's air quality analysis is unreliable and cannot	Please see Responses to Comments B5-32, which explains that the commenter has misinterpreted the size of the underground parking structure, Response to Comment B5-33 , which explains that the commenter has misinterpreted the weekday trips to be the same as weekend trips, and Response to Comment B5-34 with respect to the use of pass-by trips in the model. With respect to the commenter's assertion that the types of retail have not been disclosed, please see Response to Comment B5-8.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	constitute substantial evidence that no significant effect will occur from construction and operation of the Project. Footnotes: [25] SWAPE Comments, pp. 2-3. [26] SWAPE Comments, p. 4. [27] SWAPE Comments, p. 6. [28] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." SCAQMD, available at: http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 20 [29] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." SCAQMD, available at: http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 20 [30] SWAPE Comments, pp. 5-6. [31] SWAPE Comments, p. 6.	
B5-12	b) Multiple mitigation measures are unverified and may result in underestimated emissions Next, SWAPE identified at least two mitigation measures that are inadequately verified in the CalEEMod inputs, which may result in the DEIR underestimating the Project's air emissions. The Project's CalEEMod output files demonstrate that the model included a 6 percent reduction from "Clean Paved Roads" and a 12 percent moisture content for "Water Unpaved Roads" (Appendix C, pp. 40, 69, 94). The CalEEMod User's Guide requires that any non-default values inputted must be justified,[32] and the DEIR includes a justification: "Per BAAQMD basic control measures."[33] Footnotes: [32] "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13. [33] DEIR, Appendix C, pp. 40, 69, 94.	Please see Responses to Comments B5-35 regarding the use of BAAQMD basic control measures during construction.
B5-13	The DEIR purports to implement BAAQMD Basic Construction Mitigation Measures through Mitigation Measure AQ-2, which requires the preparation of a Construction Management Plan. However, "none of these measures [required in Mitigation Measures	Please see Responses to Comments B5-35 regarding the use of BAAQMD basic control measures during construction.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	AQ-2] discusses the 6 percent or 12 percent reductions included in the model, and as a result, these reduction percentages cannot be verified. Furthermore, none of these measures address the replacement of ground cover, and as a result, the inclusion of this measure is unsubstantiated."[34] As a result, SWAPE concludes "the model may underestimate the Project's construction emissions."[35] In addition, SWAPE identified two additional operational mitigation measures that were included in the DEIR's CalEEMod modeling, but no justifications or substantiations are provided for these measures.[36] SWAPE again concludes that "the implementation of these measures cannot be verified, and the model should not be relied upon to determine Project significance."[37] Footnotes: [34] SWAPE Comments, p. 7. [35] SWAPE Comments, p. 7. [36] SWAPE Comments, pp. 7-8. [37] SWAPE Comments, p. 8.	
B5-14	2. The Health Risk Assessments relied upon by the DEIR cannot constitute substantial evidence SWAPE's analysis indicates that the DEIR's construction and operational health risk assessments ("HRAs") are incomplete and must be revised in order to be relied upon by the City. Although the DEIR concludes that: As described above, worst-case construction risk levels based on screening level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds"[38] We have already shown above that the CalEEMod model incorrectly underestimates construction emissions. Thus, the DEIR's construction	Please see Responses to Comments B5-32 through B5-35 with respect to the comments about the values that are applied to the CalEEMod air quality model. Also, please see Responses to Comments B5-15 through B5-17 and B5-37 through B5-39, with respect to the health risk impacts of diesel particulate matter (DPM) emissions.

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TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	HRA relies on a flawed analysis of air emissions, and the City must revise the air analysis before it can reliably compute the health risks associated with the Project's construction. Footnote: [38] DEIR, Appendix C, p. 26.	
B5-15	With respect to the Project's operational health risk analysis, the DEIR only analyzes the risk posed to future sensitive receptors on the Project site¸ not to risks posed to nearby, existing sensitive receptors as a result of the Project's operation.[39] This stands in contrast with the "recommendations set forth by the Office of Environmental Health and Hazard Assessment's (OEHHA) most recent Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, which was cited in the DEIR."[40] OEHHA recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR). Failing to prepare an operational HRA to nearby, existing sensitive receptors is inconsistent with this guidance and thus, the DEIR has failed to provide substantial evidence that no health risk is associated with the Project.[41] Footnotes: [39] SWAPE Comments, p. 9. [40] DEIR, Appendix C, p. 26; "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. [41] See SWAPE Comments, p. 9.	The air quality technical analysis prepared by Kimley-Horn and Associates and included as Appendix C of the Draft EIR contains a discussion of operational health risks of potential impacts of the environment to receptors on the project site. This analysis was prepared in accordance with the 2015 OEHHA guidance. However, while this analysis is part of the technical study that was prepared to inform the project approval process, Chapter 4.1, Air Quality, of the Draft EIR does not include an analysis of or draw any CEQA impact conclusions with respect to impacts on future users of the project site. This is appropriate consistent with the Supreme Court decision regarding the assessment of the environment's impacts on proposed projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)* (2015), 62 Cal. 4th 369, which holds that it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. The commenter incorrectly asserts that the proposed mixed-use project would be a generator of toxic air contaminants that would cause a potential health risk to nearby sensitive receptors during operation. As discussed under Impact AQ-3 of the Draft EIR, the proposed project involves the future development of mixed-use project that would include neighborhood-serving retail and residential uses. It would not include stationary sources that emit TACs and would not generate a significant amount of heavy-duty truck trips (a source of DPM). Therefore, the project would not generate a significant increased cancer risk for nearby, existing off-site sensitive receptors and an HRA evaluating TAC emissions generated by the project is not warranted.
B5-16	SWAPE's also found that the DEIR failed "to sum [the excess cancer risk calculated for each age group in order] to evaluate the total cancer risk over the course of the Project's lifetime, including both construction and operation."[42] SWAPE concludes that "[t]his is	The commenter's suggestion that the Draft EIR failed to sum the excess cancer risk for each age group is incorrect. The construction risks calculations were analyzed using the California Office of Health Hazard Assessment (OEHHA) 2015 *Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments*.

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	incorrect and thus, an updated analysis should quantify the Project's construction and operational health risks and then sum them to compare to the BAAQMD threshold of 10 in one million."[43] Without correction, the DEIR fails to comply with OEHHA guidance and its analysis fails to constitute substantial evidence. Footnotes: [42] SWAPE Comments, p. 10. [43] SWAPE Comments, p. 10.	Because construction would only last a short period of time (approximately 2 years), the analysis conservatively used breathing rates and age sensitivity factors associated with the most sensitive age groups (i.e., third trimester pregnancy and ages 0 to 2 years).[1] As stated in Response to Comment B5-15, the numeric operational health risk assessment evaluating impacts to future onsite receptors was included in the air quality technical study for informational purposes, but was not part of the CEQA impact analysis in Chapter 4.1, Air Quality, of the Draft EIR. However, the operational risk calculations were conducted using CARB's Health Risk Assessment Standalone Tool (RAST). RAST uses conservative assumptions and methodologies based on OEHHA Guidance, which include the use of age sensitivity factors and 95th percentile breathing rates recommended by the BAAQMD. RAST provides the total excess cancer risk for each age group. The analysis is conservative and fully complies with the OEHHA methodology and BAAQMD recommendations.
B5-17	<u>3. A screening-level HRA correcting for the errors in the DEIR's CalEEMod inputs indicates a potentially significant health risk impact</u> In contrast to the DEIR's HRAs, SWAPE prepared a screening level HRA using corrected inputs for diesel particulate matter and assumptions "[c]onsistent with recommendations set forth by the 2015 OEHHA guidance."[44] With this data, shown below, SWAPE projects that over the course of Project construction and operation, the excess cancer risks posed to adults, children, infants, and during the third trimester of pregnancy "are approximately 4.9, 32, 100, and 4.6 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor is approximately 140 in one million, thus resulting in a potentially	This comment summarizes the findings of a screening level analysis prepared by the commenter's consultant. The consultant's analysis submitted by the commenter does not accurately represent the project and does not accurately implement the OEHHA and BAAQMD methodology. Please see Responses to Comments B5-32 through B5-35 with respect to the commenter's concerns about the values that are applied to the CalEEMod air quality model. The commenter-provided risk projections are shown to surpass BAAQMD significance thresholds, prompting the commenter to conclude that the proposed project would result in significant and unavoidable impacts. However, the commenter's risk levels and conclusions are based on overstated emissions. On page 11 of the commenter's screening-level HRA, the diesel-particulate matter (DPM) exhaust emission rate from the operational phase of the project is based on the exhaust PM_{10} annual emission rate from CalEEMod annual model runs. However, the exhaust PM_{10} emissions from CalEEMod do not directly correlate to DPM from operational emission sources. For instance, over 52

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[1] Office of Environmental Health Hazard Assessment (OEHHA). 2015, February. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

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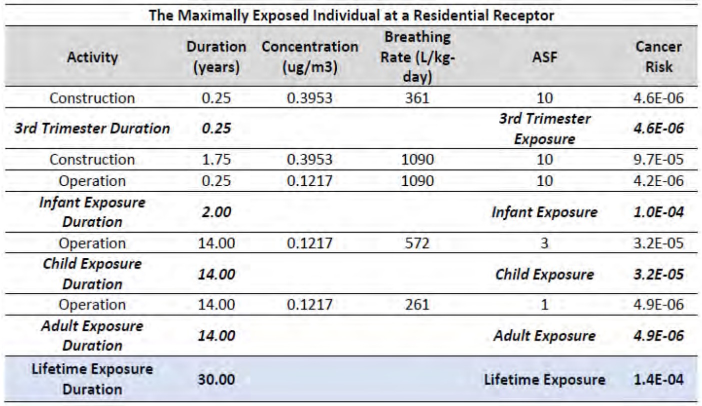
TABLE 5-1 RESPONSE TO COMMENTS

<table>
<tr><th>Comment #</th><th>Comment</th><th>Response</th></tr>
<tr><td></td><td>significant health risk impact not previously addressed or identified by the DEIR."[45]



<table>
<tr><th colspan="6">The Maximally Exposed Individual at a Residential Receptor</th></tr>
<tr><th>Activity</th><th>Duration (years)</th><th>Concentration (ug/m3)</th><th>Breathing Rate (L/kg-day)</th><th>ASF</th><th>Cancer Risk</th></tr>
<tr><td>Construction</td><td>0.25</td><td>0.3953</td><td>361</td><td>10</td><td>4.6E-06</td></tr>
<tr><td><i>3rd Trimester Duration</i></td><td><i>0.25</i></td><td></td><td></td><td><i>3rd Trimester Exposure</i></td><td><i>4.6E-06</i></td></tr>
<tr><td>Construction</td><td>1.75</td><td>0.3953</td><td>1090</td><td>10</td><td>9.7E-05</td></tr>
<tr><td>Operation</td><td>0.25</td><td>0.1217</td><td>1090</td><td>10</td><td>4.2E-06</td></tr>
<tr><td><i>Infant Exposure Duration</i></td><td><i>2.00</i></td><td></td><td></td><td><i>Infant Exposure</i></td><td><i>1.0E-04</i></td></tr>
<tr><td>Operation</td><td>14.00</td><td>0.1217</td><td>572</td><td>3</td><td>3.2E-05</td></tr>
<tr><td><i>Child Exposure Duration</i></td><td><i>14.00</i></td><td></td><td></td><td><i>Child Exposure</i></td><td><i>3.2E-05</i></td></tr>
<tr><td>Operation</td><td>14.00</td><td>0.1217</td><td>261</td><td>1</td><td>4.9E-06</td></tr>
<tr><td><i>Adult Exposure Duration</i></td><td><i>14.00</i></td><td></td><td></td><td><i>Adult Exposure</i></td><td><i>4.9E-06</i></td></tr>
<tr><td>Lifetime Exposure Duration</td><td>30.00</td><td></td><td></td><td>Lifetime Exposure</td><td>1.4E-04</td></tr>
</table>

The City must include this potentially significant impact in its analysis of air quality impacts in a recirculated EIR. Without it, the DEIR violates CEQA's mandate that the City disclose and mitigate the Project's potentially significant impacts.

Footnotes:
[44] SWAPE Comments, p. 10.
[45] SWAPE Comments, p. 13.</td><td>percent of operation-generated exhaust PM_{10} would be from natural gas combustion associated with building energy use and area sources. Natural gas combustion would not generate DPM, because diesel fuel is not part of the combustion process. In addition, the predominant mobile emission source associated with proposed land uses would be gasoline-fueled passenger cars, and not diesel-fueled trucks. For these reasons, the exhaust PM_{10} emissions from the operational CalEEMod annual output cannot be directly correlated to DPM for the purposes of an HRA.

The project would not include any substantial sources of TAC emissions and corresponding individual cancer risk following completion of construction. From an operational standpoint, the proposed project would generally not involve the use of heavy-duty diesel trucks with the exception of occasional delivery or garbage trucks. There are no other on-site operational uses that would generate TAC emissions. The project is not considered to be a substantial source of DPM warranting an operational HRA.

Additionally, it should be noted that the construction risk in the Draft EIR assumes an outdoor exposure for the entire length of construction and does not account for any reductions from the time spent indoors where air quality tends to be better. Thus, the analysis in the Draft EIR is conservative.

With respect to recirculation, please see Response to Comment B5-5.</td></tr>
<tr><td>B5-18</td><td>C. The DEIR fails to disclose, analyze, and mitigate the Project's Greenhouse Gas impacts

The DEIR's greenhouse gas ("GHG") analysis states that the proposed Project would result in a significant impact if it would (1) generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment or (2) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.[46]</td><td>Please see Responses to Comments B5-42 regarding consistency with the Cupertino Climate Action Plan, and B5-43 with respect to the BAAQMD bright-line screening threshold. In addition, please see Responses to Comments B5-32 through B5-35 with respect to the commenters concerns about the values that are applied to the CalEEMod air quality model.</td></tr>
</table>

TABLE 5-1 RESPONSE TO COMMENTS

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	We reviewed the GHG analysis with the assistance of SWAPE. As described below, our review found that the DEIR's GHG analysis violates the law and is not supported by substantial evidence. The DEIR's conclusions are not supported for three main reasons. First, the DEIR fails to use a threshold which is applicable to the Project's built-out year, in violation of CEQA. Second, even for the threshold the DEIR did use, its GHG analyses rely on several incorrect assumptions that result in a substantial underestimation of Project-related GHGs, as described below. Third, the DEIR fails to demonstrate consistency with the Cupertino CAP. **Footnote:** [46] DEIR, p. 4.5-15.	
B5-19	1. The GHG analysis relies on an inapplicable threshold in violation of CEQA Under the CEQA Guidelines, which have been recently updated, a lead agency must analyze a project's impacts on GHG emissions.[47] The Guidelines allow for several approaches to this analysis, both qualitative and quantitative. The Guidelines explicitly mandate, however, that the "analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes."[48] The DEIR analysis relies on the tiered approach developed by the Bay Area Air Quality Management District ("BAAQMD") for assessing the impacts of land use development projects. If a project is within the jurisdiction of an agency that has a "qualified" GHG reduction strategy, the project can assess consistency of its GHG emissions impacts with the reduction strategy. BAAQMD has adopted screening criteria and significance criteria for development projects that would be applicable for the proposed project. If a project exceeds the BAAQMD Guidelines' GHG screening-level sizes, the proposed project	Please see Response to Comment B5-42 regarding consistency with the Cupertino Climate Action Plan, and Response to Comment B5-43 with respect to the BAAQMD bright-line screening threshold.

TABLE 5-1 RESPONSE TO COMMENTS

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	would be required to conduct a GHG emissions analysis using the BAAQMD significance criteria of 1,100 million metric tons of carbon dioxide equivalent per year per year (MTCO2e per year). Here, the DEIR analyzed the Project's annual emissions and found they were below the "bright-line" threshold. BAAQMD's significance threshold, however, is not applicable to the Project, and relying on it violates CEQA. BAAQMD's thresholds, included in the district's 2017 CEQA Guidelines, were developed to comply with the state reduction target as it is embodied in AB 32,[49] which mandates that statewide greenhouse gas emissions be reduced to 1990 levels by the target year 2020.[50] In 2016, the state passed SB 32,[51] which codified a new statewide 2030 GHG emissions reduction target of 40% below 1990 levels. Following the new legislation, the California Air Resources Board ("CARB") adopted in December 2017 a new scoping plan to outline the strategy needed to achieve SB 32 GHG targets. These are the binding "state regulatory scheme" that the CEQA Guidelines require agencies to account for. The BAAQMD Guidelines do not account for or include any numeric threshold for compliance with SB 32 or the scoping plan and are therefore not applicable to projects that will be built and operated beyond the AB 32 target year.[52] Because the Project's first fully operational year would be 2023, and it would continue to operate many years beyond that, the City must analyze the Project for its compatibility with the state's mandated goals for, at the very least, the year 2030.[53] BAAQMD itself advises lead agencies not to rely on its numeric significance thresholds and instead advises they make significance determinations based on the most recent state greenhouse gas reduction targets. For example, in recent comment letters to lead agencies, BAAQMD stated as follows:	

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	The Air District encourages the City to make a significance determination for greenhouse gas impacts based on the most recent State greenhouse gas targets and CEQA guidance. The Air District's 2010 CEQA guidelines are based on the State's 2020 greenhouse gas targets. These targets have been superseded by the State's 2030 and 2050 climate stabilization goals and by the most recent draft of the AB 32 Scoping Plan written by the California Air Resources Board.[54] The GHG impact analysis should include an evaluation of the Plan's consistency with the California Air Resources Board 2017 Scoping Plan and State and Air District climate stabilization goals for 2030 and 2050. Please be advised that the Air District is in the process of updating the CEQA guidelines/thresholds and current thresholds for GHGs should not be used for this plan.[55] BAAQMD is in the process of updating its current CEQA Guidelines and thresholds of significance.[56] The Draft EIR must be revised to analyze the Project's compatibility with the reduction targets set in SB 32, which go beyond those set in AB 32. As it is now, the DEIR's analysis violates both CEQA and the Supreme Court rulings on GHG analysis and cannot constitute substantial evidence. Footnotes: [47] 14 CCR §15064.4. [48] 14 CCR §15064.4(b) [49] See, California Environmental Quality Act Air Quality Guidelines, Bay Area Air Quality Management District, May 2017, at p. D-27. [50] California Air Resources Board, Assembly Bill 32 Overview; available at: https://www.arb.ca.gov/cc/ab32/ab32.htm, accessed April 3, 2019. [51] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id =201520160SB32 [52] See also Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497. [53] SWAPE Comments, p. 21. [54] Greg Nudd, BAAQMD, Letter to Joshua McMurray, Oakley, CA, Oakley Logistics Center Project, March 21, 2019; available at: http://www.baaqmd.gov/~/media/files/planning-and-	

COMMENTS AND RESPONSES

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	research/ceqaletters/2019/2019_03_21_city_of_oakley_oakley_logistics_center_nop-pdf.pdf?la=en, accessed April 12, 2019. [55] Greg Nudd, BAAQMD, Letter to Alicia Parker, City of Oakland, RE: Downtown Oakland Specific Plan - Notice of Preparation of a Draft Environmental Impact Report, February 15, 2019; available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqaletters/2019/downtown_oakland_specific_plan_eir_notice_of_preparation_021519-pdf.pdf?la=en [56] BAAQMD, CEQA Guidelines Update Underway; available at: http://www.baaqmd.gov/plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed April 9, 2019.	
B5-20	2. The DEIR significantly underestimates GHG emissions from the Project a) The DEIR does not support its conclusion that the Project will result in a net change of 359 MTCO2e/Year The DEIR claims "that the proposed project would generate 1,843 MTCO2e per year."[57] However, because, the project site is currently developed with approximately 71,250 square-feet of shopping center, which generates 1,484 MTCO2e per year, the proposed project's emissions would represent a net increase in GHG emissions of 359 MTCO2e per year."[58] It therefore concludes that the Project "would not result in an increase in GHG emissions that exceed the BAAQMD's bright-line screening threshold of 1,100 MTCO2e per year."[59] However, this net increase assumes, without support in the record, that the current emissions at the Project site will disappear after the Project is completed. This is contrary to common sense and the CEQA requirement that the "lead agency…make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."[60] Under this mandate, the City must provide substantial evidence to support its conclusion that the Project's existing emissions sources will be extinguished by the new project and not simply displaced.[61] The City has not done so here.	The commenter's opinion is incorrect that it is improper to identify the project's net emissions increase. State CEQA Guidelines Section 15125 provides the following guidance for establishing the baseline: An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The project is an infill mixed-use project on a currently developed but underutilized site with buildings that were constructed between 1973 and 1976. The project proposes new energy efficient buildings that would comply with the latest building codes, resulting in an efficient use of the site. The Draft EIR does not assume that the existing emissions sources would be extinguished from the site. In reality, the existing sources (i.e., businesses) would either relocate to other vacant buildings in the City or region or close down completely. The businesses that do relocate to other existing buildings would not increase the emissions that have already been accounted for and included in the baseline, but would simply move them to a new location. In the event that businesses currently occupying the site relocate and require construction of new development, that new development would require discretionary approval and CEQA analysis. As noted above, CEQA requires the analysis of a project by comparing it to existing conditions. It is the changes in environmental conditions between existing conditions and project conditions that represent the environmental impacts

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	Footnotes: [57] DEIR, p. 4.5-17. [58] DEIR, p. 4.5-17. [59] DEIR, p. 4.5-17. [60] CEQA Guidelines, § 15064.4, subd. (a) [61] See Friends of the Eel River v. Sonoma County Water Agency (2003) 108 Cal. App. 4th 859 (holding that an environmental baseline is to be construed broadly to ensure the fullest protection to the environment and cannot be narrowly defined by the project site if evidence indicates the Project's environmental damage will occur beyond the boundaries of the Project site.).	of the proposed project. Therefore, it is inconsistent with the intent of CEQA and not reasonable to assert that it is improper to evaluate the net emissions for the project site.
B5-21	b) The DEIR's GHG analysis relies upon an incorrect and unsubstantiated air model, unsubstantiated assumptions, and unsubstantiated mitigation measures that underestimate GHGs associated with the Project Similar to the conclusion reached in section II(b)(1) of these comments, the DEIR's analysis of GHGs relies on underestimated inputs, unsubstantiated assumptions about the Project's retail components, and unsupported mitigation measures that significantly underestimate the GHG emissions associated with the Project. The City must correct for these underestimations in a recirculated DEIR.	With respect to the commenter's opinion regarding model inputs, please see Response to Comment B5-32, which explains the commenter has misinterpreted the size of the underground parking structure, Response to Comment B5-33, which explains the commenter has misinterpreted the weekday trips to be the same as weekend trips, and Response to Comment B5-34 with respect to the use of pass-by trips in the model. With respect to the commenter's assertion that the types of retail have not been disclosed, please see Response to Comment B5-8. There are no mitigation measures for the reduction of GHG emissions, because as discussed in Section 4.5.3.1, Impact Analysis, of the Draft EIR, Impacts GHG-1 and GHG-2, in addition to Impact GHG-3, were determined to be less than significant. However, with respect to mobile-related reduction measures accounted for in the modeling, please see Responses to Comment B5-36. With respect to recirculation, please see Response to Comment B5-5.
B5-22	3. The Cupertino CAP Measures are Not Properly Incorporated in The Project CEQA states that for a DEIR to rely on a CAP in its analysis, it must identify which requirements apply to the Project and make those requirements binding and enforceable to the Project by listing them as mitigation measures, if they are not already binding and enforceable in the City's CAP:	Please see Response to Comment B5-42.

COMMENTS AND RESPONSES

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project.[62] Here, the DEIR fails to demonstrate consistency with the City's CAP as required by CEQA. Although it mentions certain steps taken in coordination with the CAP's community-wide measures, it fails to incorporate any project-level measures from the CAP or include any of the CAP's measures as binding mitigation in the DEIR.[63] SWAPE also indicates that even for the inapplicable communitywide measures relied upon by the DEIR, it also fails to demonstrate consistency with those community-wide measures.[64] Without more, the DEIR has not provided substantial evidence of consistency with the City's CAP. Footnotes: [62] 14 CCR § 15183.5. [63] SWAPE Comments, p. 15. [64] SWAPE Comments, p. 15.	
B5-23	D. The DEIR fails to disclose, analyze, and mitigate the Project's Traffic Impacts CEQA requires the City to analyze the Project's direct, indirect and cumulative impacts from traffic generated by the Project. We reviewed the DEIR and the Transportation Analysis (TA) with the assistance of Dan Smith, a Civil and Traffic Engineer. Mr. Smith's review found that the City's analysis of transportation impacts is inadequate for several reasons: The TA produces an inaccurate analysis of VMT impacts; and the TA makes no accounting of traffic impacts evident from Cupertino's Vallco Project and EIR; and the DEIR does not disclose many CalEEMod parameters that may have an impact on model outcomes.	Please see Responses to Comments B5-52 regarding CalEEMod parameters and their relationship to the transportation analysis, B5-53 for a response regarding the Vallco Project, and B5-24, B5-25, and B5-54 for a detailed response regarding the VMT analysis presented in the Draft EIR.

TABLE 5-1 RESPONSE TO COMMENTS

<table>
<tr><th>Comment #</th><th>Comment</th><th>Response</th></tr>
<tr>
<td>B5-24</td>
<td>1. The DEIR’s VMT analysis does not accurately analyze VMT impacts

The DEIR purports to comply with Section 15064.3(b)(1) in its conclusion that VMT impacts from the Project would be less than significant.[65] However, the DEIR’s analysis appears to contain several deficiencies that call into question the underlying analysis.

First, the DEIR appears to combine both the residential and commercial land uses in its VMT analysis, despite the CEQA Technical Advisory for VMT advising that “[c]ombining land uses for VMT analysis is not recommended…[because c]ombining land uses for a VMT analysis could streamline certain mixes of uses in a manner disconnected from policy objectives or environmental outcomes. Instead, OPR recommends analyzing each use separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold.”[66] The DEIR fails to do this or justify its decision not to follow the technical advisory, and as a result, the DEIR’s VMT analysis is unreliable.

Footnotes:
[65] DEIR, p. 4.8-23.
[66] Technical Advisory on Evaluating Transportation Impacts in CEQA, p. 6 (Dec. 2018).</td>
<td>The commenter incorrectly asserts the VMT calculations combined the land uses. As shown in Appendix E, Greenhouse Gas Emissions, of the Draft EIR, the VMT was calculated by land uses in the table below for a total annual VMT of 2,663,868.

<table>
<tr><th>LAND USE</th><th>ANNUAL VMT</th></tr>
<tr><td>Apartments Low Rise</td><td>887,991</td></tr>
<tr><td>Apartments Mid Rise</td><td>918,713</td></tr>
<tr><td>Retirement Community</td><td>178,725</td></tr>
<tr><td>Strip Mall</td><td>678,439</td></tr>
<tr><td>TOTAL</td><td>2,663,868</td></tr>
</table>

The following addition to Chapter 4.8, Transportation, of the Draft EIR has been made in Chapter 3 of this Response to Comments document. This revision acknowledges the VMT consistent with the GHG Appendix. The revision is as follows:

Chapter 4.8, Transportation
Project-specific VMT was determined using CalEEMod and was calculated for Existing and Existing plus Project conditions. As previously stated, the existing commercial space (71,250 square feet), with an 85 percent occupancy rate produces an approximate annual VMT of 2,782,747 miles, or a daily VMT of 7,624 miles. The proposed project would produce an approximate annual VMT of ~~2,662,683~~2,663,868 miles, or a daily VMT of ~~7,295~~7,298 miles. This would be a reduction of approximately ~~120,064~~118,879 miles annually, or ~~329~~326 miles daily.

This revision does not affect any conclusions or significance determinations provided in the Draft EIR.</td>
</tr>
<tr>
<td>B5-25</td>
<td>Next, the DEIR’s VMT conclusion includes an analysis of the approximate annual or daily VMT of the Project and the existing site. However, this too goes against the guidance from the Technical Advisory, which states:

When assessing climate impacts of some types of land use projects, use of an efficiency metric (e.g., per capita, per employee) may</td>
<td>Please see Response to Comment B5-24 with respect to the portion of the comment regarding analysis of the projected VMT by land use (i.e., residential, retail, or on the dominant use). As shown in Response to Comment B5-24, VMT was calculated by land use.</td>
</tr>
</table>

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	provide a better measure of impact than an absolute numeric threshold. Thus, the Technical Advisory explicitly recommends an assessment of VMT impacts in per capita over absolute numeric impacts for climate related transportation improvements, which is the ultimate goal in the Cupertino General Plan's push for VMT.[67] What's more, in its analysis, the DEIR cites the Cupertino General Plan EIR, which calculated its VMT projections in per capita, not annual or daily. The City must correct its VMT analysis to include a separate analysis of the projected VMT from residential and retail or on the dominant use. The City must also modify its analysis to reflect a per capita comparison, in line with the Technical Advisory, and to be able to better compare to the City's VMT goals, not the existing land use. Footnote: [67] Cupertino General Plan M-23	The following addition to Chapter 4.8, Transportation, of the Draft EIR has been made in Chapter 3 of this Response to Comments document. This revision adds the VMT per capita for the proposed project. The revision is as follows: Chapter 4.8, Transportation As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 under General Plan buildout conditions. The proposed project would construct a 242 residential units, and 20,000 square feet of retail space, which is consistent with the land use evaluated in the General Plan EIR, and therefore, would not directly result in any additional new population growth or employment growth beyond what was analyzed in the General Plan EIR. As described in Chapter 3, Project Description, of the Draft EIR, in Section 3.4.3, Population and Employment Projections, the proposed project would generate 695 new residents and 70 new employees for a total of 765 people. The project would produce total annual VMT of 2,663,868. Therefore, the proposed project would have a per capita VMT impact of 3,482 vehicle miles per capita annually or 9.54 daily vehicle miles per day. As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 under General Plan buildout conditions. Therefore, the project's per capita VMT would be less than the City's per capita VMT for General Plan buildout. Accordingly, implementation of the proposed project would be consistent with and would have no effect on the VMT estimates presented in the General Plan EIR. Please also see Response to Comments B5-53 for additional discussion of VMT. This revision does not affect any conclusions or significance determinations provided in the Draft EIR. The project is consistent with General Plan Policy M-8.2: Land Use, which requires the City to support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita Vehicle Miles Traveled (VMT), reducing impacts on the City's transportation network and maintaining the desired levels of service for all modes of transportation. As described in Chapter 3 of the Draft EIR (see page 3-9), the project site is within a Santa Clara Valley Transportation

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		Authority City Cores, Corridors & Station Areas Priority Development Area (PDA). PDAs are transit-oriented, infill development opportunity areas within existing communities. As described in the General Plan (see page LU-7), PDAs are areas where new development will support the day-to-day needs of residents and workers in a pedestrian-friendly environment served by transit. The project site is also a qualifying Transit Priority Area or TPA, which is an area within one-half mile of a major transit stop. As stated on page 3-9 of the Draft EIR, the overarching goal of developing a high-density, mixed use development within a PDA and a TPA is to concentrate development in areas where there are existing services and infrastructure rather than locating new growth in outlying areas where substantial transportation investments would be necessary to maximize energy conservation and achieve the per capita passenger vehicle, vehicle miles traveled, and associated greenhouse gas (GHG) emissions reduction.
B5-26	2. The DEIR ignores development from the Vallco Project Mr. Smith indicates that a large project in Cupertino near the Project site ("Vallco Project") was not included in the DEIR's traffic impacts analysis. Although he notes that some of the Vallco Project's approvals have been repealed, the certifying FEIR for the Vallco Project has not been repealed and there remains the potential that some form of the prior project will be implemented. Specifically, one of the alternatives would "involve 23,417 net new trips daily, including 307 in the AM peak and 2,398 in the PM peak hour that were not present when the counts supporting the Westport DEIR analysis were conducted."[68] Without analyzing the additional impact from the Vallco Project, the Project's traffic analysis is fundamentally incomplete and cannot constitute substantial evidence supporting a conclusion of less than a significant impact. Footnote: [68] Smith Comments, p. 2.	Please see Response to Comment B5-53 regarding the Vallco project and the transportation evaluation in the Draft EIR.
B5-27	3. The DEIR does not include the underlying CalEEMod inputs that would allow for review of the DEIR's VMT analysis	The CalEEMod outputs are included in the Appendix E, Greenhouse Gas Emissions, of the Draft EIR. The trip length or purpose is included in Appendix E as well. The annual, winter, and summer general output files generated through CalEEMod

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	Although the DEIR indicates that VMT "were calculated using California Emissions Estimator Model (CalEEMod)," the DEIR does not contain many relevant CalEEMod inputs for review to determine the validity of the DEIR's VMT conclusions, including trip length or trip purpose.[69] As Mr. Smith notes, "it is important for the public to understand whether data from local traffic models has been employed or the outcome is just the product of default values. The must clarify whether local values have been substituted for default values and if not, why not."[70] Without this information, the DEIR cannot support their conclusion of no significant impact with substantial evidence. Footnotes: [69] Smith Comments, p. 2. [70] Smith Comments, p. 2.	include vehicle trips and VMT information under Section 4.0 Operational Detail – Mobile.
B5-28	III. CONCLUSION The DEIR is inadequate as an environmental document because the City fails to properly disclose, analyze and mitigate the Project's significant impacts on air quality, public health, GHGs and transportation. The City cannot approve the Project until it prepares and re-circulates a revised DEIR that resolves these issues and complies with CEQA's requirements.	This comment, which serves as closing remark, incorrectly states that the Draft EIR is inadequate as demonstrated in the responses to this comment letter. No response is required. With respect to recirculation, please see Response to Comment B5-5.
B5-29	**Exhibit A - SWAPE** Dear Mr. Messing, We have reviewed the November 2019 Draft Environmental Impact Report ("DEIR") for the Westport Mixed-Use Project ("Project") located in the City of Cupertino ("City"). The Project proposes to construct 18 buildings, including three rowhouse buildings, 13 townhouse buildings, and two mixed-use buildings, with 242 residential units and 20,000 square feet of retail space on the 8.1-acre Project site.	The comment serves as an opening remark. No response is required.
B5-30	Our review concludes that the DEIR fails to adequately evaluate the Project's Air Quality, Health Risk, and Greenhouse Gas impacts. As a	The comment expresses an opinion regarding the air quality, health risk assessment, and GHG emissions analysis in the Draft EIR and asserts that the construction and

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the surrounding environment.	operational air emissions are underestimated and inadequately addressed. Please see Responses to Comments B5-31 and B5-32.
B5-31	Air Quality Unsubstantiated Input Parameters Used to Estimate Project Emissions The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project specific values, but the California Environmental Quality Act (CEQA) requires that such changes be justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.[3] Review of the Project's air modeling, provided as Appendix C to the DEIR, demonstrates that the DEIR underestimates emissions associated with Project activities. As previously stated, the DEIR's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in the Air Quality and Greenhouse Gas Impact Analysis, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated.	Please see Response to Comment B5-32, which explains the commenter has misinterpreted the size of the underground parking structure, see Response to Comment B5-33, which explains the commenter has misinterpreted the weekday trips to be the same as weekend trips, and see Response to Comment B5-34 with respect to the use of pass-by trips in the model.

COMMENTS AND RESPONSES

TABLE 5-1 RESPONSE TO COMMENTS

<table>
<tr><th>Comment #</th><th>Comment</th><th>Response</th></tr>
<tr><td></td><td>An updated EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Footnotes:
[1] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/defaultsource/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.
[2] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/defaultsource/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 1, 9.
[3] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/defaultsource/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, fn 1, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.</td><td></td></tr>
<tr><td>B5-32</td><td>Use of an Underestimated Land Use Size

Review of the Project's CalEEMod output files demonstrates that the size of the proposed parking garage was underestimated within the model, and as a result, emissions may be underestimated by the model.

According to the DEIR the Project proposes to construct a 148,040 square foot parking garage (see excerpt below) (p. 3-12, Table 3-1).

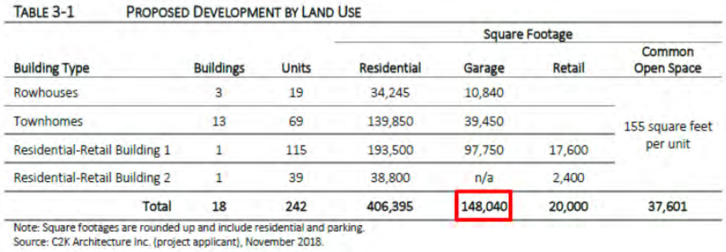
TABLE 3-1 PROPOSED DEVELOPMENT BY LAND USE
<table>
<tr><th>Building Type</th><th>Buildings</th><th>Units</th><th>Square Footage
Residential</th><th>Square Footage
Garage</th><th>Square Footage
Retail</th><th>Common Open Space</th></tr>
<tr><td>Rowhouses</td><td>3</td><td>19</td><td>34,245</td><td>10,840</td><td></td><td>155 square feet per unit</td></tr>
<tr><td>Townhomes</td><td>13</td><td>69</td><td>139,850</td><td>39,450</td><td></td><td></td></tr>
<tr><td>Residential-Retail Building 1</td><td>1</td><td>115</td><td>193,500</td><td>97,750</td><td>17,600</td><td></td></tr>
<tr><td>Residential-Retail Building 2</td><td>1</td><td>39</td><td>38,800</td><td>n/a</td><td>2,400</td><td></td></tr>
<tr><td>Total</td><td>18</td><td>242</td><td>406,395</td><td>148,040</td><td>20,000</td><td>37,601</td></tr>
</table>
Note: Square footages are rounded up and include residential and parking.
Source: C2K Architecture Inc. (project applicant), November 2018.</td><td>The commenter has incorrectly interpreted the size of the parking garage shown in Table 3-1, Proposed Development by Land Use, in Chapter 3, Project Description, of the Draft EIR, on page 3-12. As shown in Table 3-1, which is reproduced by the commenter in their comment, the proposed enclosed parking structure would be 97,750 square feet and not the sum of the total parking garages on the project site (148,040 square feet), which also includes private garages for the proposed rowhouses (10,840 square feet) and townhomes (39,450 square feet).

The air quality modeling was prepared and reviewed concurrently with the City's ongoing project review process prior to the completion of the conceptual site plans that were used for the project description, which is a standard practice. Accordingly, the size for each project component in Table 3-1 is not precise. It is common practice and acceptable for projects to have minor changes throughout the review and approval process, which can often take a few years. While the modeling prepared for the Draft EIR analyzed 232 parking garage spaces for the enclosed parking garage with elevator, it accounted for 92,800 square feet instead of the 97,750 square feet. This difference is less than 5,000 square feet, however, which is nominal. Furthermore, the rowhouses and townhomes, shown as "apartments low rise" in the model, include the private parking structures and are overestimated by 23,615 square feet (224,385 square feet compared to 248,000 square feet), which</td></tr>
</table>

TABLE 5-1 RESPONSE TO COMMENTS

<table>
<tr><th>Comment #</th><th>Comment</th><th>Response</th></tr>
<tr><td></td><td>As you can see in the above excerpt, the Project proposes 148,040 square feet of garage. However, review of the CalEEMod output files demonstrates that the model only included 92,800 square feet of enclosed parking structure (see excerpt below) (Appendix C, pp. 39, 68, 93).

<table>
<tr><th>Land Uses</th><th>Size</th><th>Metric</th><th>Lot Acreage</th><th>Floor Surface Area</th><th>Population</th></tr>
<tr><td>Enclosed Parking Structure</td><td>232.00</td><td>Space</td><td>2.09</td><td>92,800.00</td><td>0</td></tr>
<tr><td>Parking Lot</td><td>117.00</td><td>Space</td><td>1.05</td><td>46,800.00</td><td>0</td></tr>
<tr><td>Apartments Low Rise</td><td>68.00</td><td>Dwelling Unit</td><td>5.50</td><td>248,000.00</td><td>252</td></tr>
<tr><td>Apartments Mid Rise</td><td>115.00</td><td>Dwelling Unit</td><td>3.03</td><td>193,500.00</td><td>329</td></tr>
<tr><td>Retirement Community</td><td>39.00</td><td>Dwelling Unit</td><td>7.80</td><td>38,800.00</td><td>112</td></tr>
<tr><td>Strip Mall</td><td>20.00</td><td>1000sqft</td><td>0.46</td><td>20,000.00</td><td>0</td></tr>
</table>

As you can see in the excerpt above, the model underestimated the parking garage by 55,240 square feet. As previously stated, the land use type and size features are used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations, such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).[4] By underestimating the size of the proposed parking garage, the model underestimates the Project's construction and operational emissions and should not be relied upon to determine Project significance.

Footnote:
[4] "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/defaultsource/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 18.</td><td>more than accounts for the 5,000 square-foot change in the parking garage square footage. Overall, the modeling prepared for the project included 593,100 square feet of building area (including parking garage) while the project description only includes 554,435 square feet of building space (including double counting of parking). Accordingly, the model conservatively overestimates the proposed project that is the subject of this EIR and no revisions are required.</td></tr>
<tr><td>B5-33</td><td>Underestimated Sunday trip Rates

Review of the Project's CalEEMod output files demonstrates that the Sunday trip rates for the proposed Project are underestimated. As a result, the Project's mobile-source operational emissions are underestimated.</td><td>The transportation analysis did not include Saturday or Sunday trips, only showing a weekday daily trip in the Project Trip Generation table. The commenter has misinterpreted Table 2 in the *Westport Cupertino – Transportation Analysis*, dated November 27, 2018 and included in Appendix H of the Draft EIR. The title of the column the commenter is referring to is titled "Weekday," and does not include weekend trips. Weekend trips are less than weekday trips. No revisions are required.</td></tr>
</table>

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	According to the Transportation Assessment (TA), provided as Appendix H to the DEIR, the Project would generate approximately 1,934 total daily trips (see excerpt below) (Appendix H, p. 4, Table 2).	The CalEEMod User's Guide states: "Since CalEEMod has different trip rates for different days of the week, the daily maximum will be determined based on the highest total of either weekday, Saturday, or Sunday trip emissions." Therefore, for Operational Mobile emissions the daily maximum that is used in the EIR analysis is the weekday daily trip emissions. However, for annual emissions an average is taken. As shown in Table 4.8-5, Project Trip Generation Estimates, in Chapter 4.8 Transportation, of the Draft EIR on page 4.8-16, the proposed project would generate 2,174 average daily weekday trips before trip reductions and credits and 1,934 average daily weekday trips after trip reductions and credits. The analysis in the Draft EIR conservatively modeled project trips without internal capture (2,170 daily trips) rather than the total net project trips of 1,934 daily trips.[2] This is a difference of 236 daily trips. Overall, the Draft EIR modeled 2,170 weekday trips (260 weekdays per year), 2,284 Saturday trips (52 Saturdays per year), and 1,693 Sunday trips (52 Saturdays per year). This results in an average of 2,112 daily trips, which still exceeds the 1,934 daily trips identified in the traffic study. Further, although the assumptions in the analysis are appropriate, the project's air quality and GHG emissions are far below BAAQMD thresholds and modifying the Sunday trip generation rate would not change the magnitude or severity of the project impacts and would not trigger the need for new mitigation measures. For example, the project's highest operational criteria pollutants are 70 percent or more below the BAAQMD threshold (refer to Draft EIR Table 4.1-8). In addition, as described in Response to Comment B5-43, below, GHG emissions would result in a net reduction of 57 $MTCO_2e$ annually.

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[2] Internal trips are trips associated with a mixed-use project that both begin and end within the development.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response

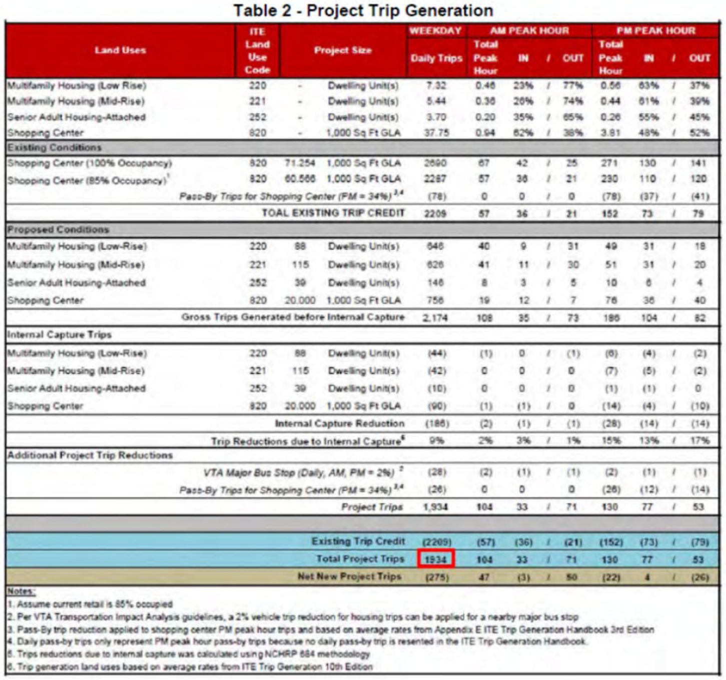
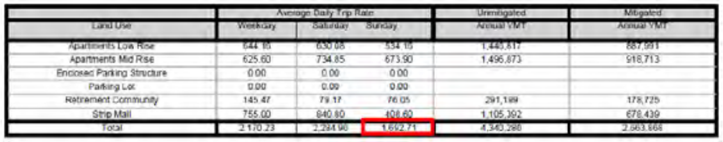


Table 2 - Project Trip Generation

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR		PM PEAK HOUR	
				Daily Trips	Total Peak Hour	IN / OUT	Total Peak Hour	IN / OUT
Multifamily Housing (Low Rise)	220	-	Dwelling Unit(s)	7.32	0.46	23% / 77%	0.56	63% / 37%
Multifamily Housing (Mid-Rise)	221	-	Dwelling Unit(s)	5.44	0.36	26% / 74%	0.44	61% / 39%
Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35% / 65%	0.26	55% / 45%
Shopping Center	820	-	1,000 Sq Ft GLA	37.75	0.94	62% / 38%	3.81	48% / 52%
Existing Conditions								
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42 / 25	271	130 / 141
Shopping Center (85% Occupancy)[1]	820	60.566	1,000 Sq Ft GLA	2287	57	36 / 21	230	110 / 120
Pass-By Trips for Shopping Center (PM = 34%)[3,4]				(78)	0	0 / 0	(78)	(37) / (41)
TOAL EXISTING TRIP CREDIT				2209	57	36 / 21	152	73 / 79
Proposed Conditions								
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	646	40	9 / 31	49	31 / 18
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	626	41	11 / 30	51	31 / 20
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	146	8	3 / 5	10	6 / 4
Shopping Center	820	20.000	1,000 Sq Ft GLA	756	19	12 / 7	76	36 / 40
Gross Trips Generated before Internal Capture				2,174	108	35 / 73	186	104 / 82
Internal Capture Trips								
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(44)	(1)	0 / (1)	(6)	(4) / (2)
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	(42)	0	0 / 0	(7)	(5) / (2)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(10)	0	0 / 0	(1)	(1) / 0
Shopping Center	820	20.000	1,000 Sq Ft GLA	(90)	(1)	(1) / 0	(14)	(4) / (10)
Internal Capture Reduction				(186)	(2)	(1) / (1)	(28)	(14) / (14)
Trip Reductions due to Internal Capture[5]				9%	2%	3% / 1%	15%	13% / 17%
Additional Project Trip Reductions								
VTA Major Bus Stop (Daily, AM, PM = 2%)[2]				(28)	(2)	(1) / (1)	(2)	(1) / (1)
Pass-By Trips for Shopping Center (PM = 34%)[3,4]				(26)	0	0 0	(26)	(12) / (14)
Project Trips				1,934	104	33 / 71	130	77 / 53
Existing Trip Credit				(2209)	(57)	(36) / (21)	(152)	(73) / (79)
Total Project Trips				1934	104	33 / 71	130	77 / 53
Net New Project Trips				(275)	47	(3) / 50	(22)	4 / (26)

Notes:
1. Assume current retail is 85% occupied
2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook.
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

As you can see in the above excerpt, the TA estimated approximately 1,934 daily trips for the Project. However, review of the Project's CalEEMod output files demonstrates that the model calculated a value of 1,692.71 total daily trips for Sunday (see excerpt below) (Appendix C, pp. 58, 87, 112).



	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	534.16	1,446,817	887,991
Apartments Mid Rise	625.60	734.85	673.90	1,496,873	918,713
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	76.05	291,189	178,725
Strip Mall	755.00	840.80	408.60	1,105,392	678,439
Total	2,170.23	2,294.90	1,692.71	4,340,288	2,663,868

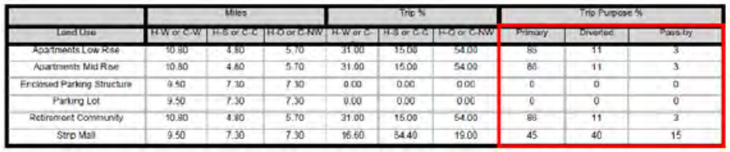
As you can see in the above excerpt, the number of total daily trips calculated by the model for Sunday was underestimated by approximately 242 trips and is thus inconsistent with the information

TABLE 5-1 RESPONSE TO COMMENTS

<table>
<tr><th>Comment #</th><th>Comment</th><th>Response</th></tr>
<tr><td></td><td>provided in the TA. As a result, the model may underestimate the Project’s operational emissions and should not be relied upon to determine Project significance.</td><td></td></tr>
<tr><td>B5-34</td><td>Use of Incorrect Trip Purpose Percentages

Review of the Project’s CalEEMod output files demonstrate that the model double counts the number of pass-by trips expected to occur throughout Project operation. As a result, the model underestimates the Project’s operational emissions.

CalEEMod separates the operational trip purposes into three categories: primary, diverted, and pass-by trips. According to Appendix A of the CalEEMod User’s Guide, the primary trips utilize the complete trip lengths associated with each trip type category. Diverted trips are assumed to take a slightly different path than a primary trip and are assumed to be 25% of the primary trip lengths. Pass-by trips are assumed to be 0.1 miles in length and are a result of no diversion from the primary route.[5] Review of the Project’s CalEEMod output files demonstrates that the trip purpose percentage was divided amongst primary, diverted, and pass-by trip types for the Project’s shopping center land use (see excerpt below) (Appendix C, pp. 58, 59, 87, 112).


<table>
<tr><th></th><th>Miles</th><th></th><th></th><th>Trip %</th><th></th><th></th><th>Trip Purpose %</th><th></th><th></th></tr>
<tr><th>Land Use</th><th>H-W or C-W</th><th>H-S or C-C</th><th>H-O or C-NW</th><th>H-W or C-</th><th>H-S or C-C</th><th>H-O or C-NW</th><th>Primary</th><th>Diverted</th><th>Pass-by</th></tr>
<tr><td>Apartments Low Rise</td><td>10.80</td><td>4.80</td><td>5.70</td><td>31.00</td><td>15.00</td><td>54.00</td><td>86</td><td>11</td><td>3</td></tr>
<tr><td>Apartments Mid Rise</td><td>10.80</td><td>4.80</td><td>5.70</td><td>31.00</td><td>15.00</td><td>54.00</td><td>86</td><td>11</td><td>3</td></tr>
<tr><td>Enclosed Parking Structure</td><td>9.50</td><td>7.30</td><td>7.30</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Parking Lot</td><td>9.50</td><td>7.30</td><td>7.30</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Retirement Community</td><td>10.80</td><td>4.80</td><td>5.70</td><td>31.00</td><td>15.00</td><td>54.00</td><td>86</td><td>11</td><td>3</td></tr>
<tr><td>Strip Mall</td><td>9.50</td><td>7.30</td><td>7.30</td><td>16.60</td><td>64.40</td><td>19.00</td><td>45</td><td>40</td><td>15</td></tr>
</table>

As you can see in the above excerpt, pass-by trips account for 15% of the strip mall land use’s trips. However, as demonstrated in the DEIR’s Transportation Assessment (TA), pass-by trips for this land use were already accounted for in the Project Trip Generation calculations (see excerpt below) (Appendix H, p. 4, Table 2).</td><td>As discussed in Chapter 4.1, Air Quality, of the Draft EIR, (see pages 4.1-17 and 4.1-20), the mobile emissions conservatively represent emissions associated with the full project (i.e., 2,174 daily vehicle trips), and do not take credit/trip reductions for the existing uses (i.e., internal capture, proximity to transit priority area, and pass-by trips) which are described in Chapter 4.8, Transportation, in Section 4.8.2.6, Trip Reductions and Credits. As shown in Table 4.8-5 (Project Trip Generation Estimates), the total project-related daily trips without trip reductions and credits would be 2,174 daily trips compared to the total net project trips of 1,934 daily trips when trip reductions and credits are applied. Therefore, the Draft EIR does not double-count pass-by trips expected to occur during the project’s operation. As explained in Response to Comment B5-33, above, the vehicle trips modeled for the Draft EIR are more conservative than what is anticipated for the project in the transportation analysis prepared for the proposed project.</td></tr>
</table>

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response

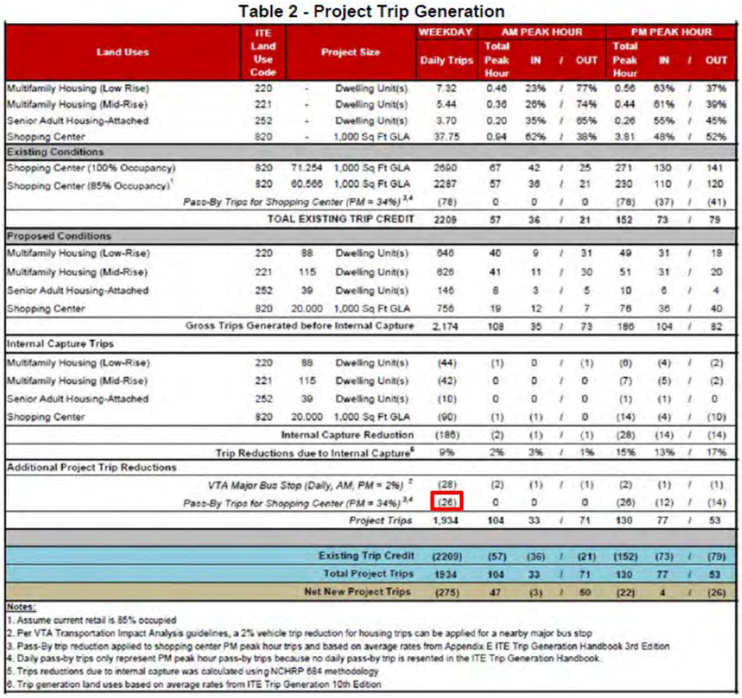


Table 2 - Project Trip Generation

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR			PM PEAK HOUR		
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Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35%	65%	0.26	55%	45%
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Existing Conditions										
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42	25	271	130	141
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Gross Trips Generated before Internal Capture				2,174	108	35	73	186	104	82
Internal Capture Trips										
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(44)	(1)	0	(1)	(6)	(4)	(2)
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	(42)	0	0	0	(7)	(5)	(2)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(10)	0	0	0	(1)	(1)	0
Shopping Center	820	20.000	1,000 Sq Ft GLA	(90)	(1)	(1)	0	(14)	(4)	(10)
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Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(26)	0	0	0	(26)	(12)	(14)
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Total Project Trips				1934	104	33	71	130	77	53
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Notes:
1. Assume current retail is 85% occupied
2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

Therefore, the CalEEMod model should not have included pass-by trips in the trip purpose percentages for the shopping center land use. By spreading the trip purpose percentages amongst the three categories, the model is accounting for pass-by trips that have already been accounted for in the DEIR's TA. Because the proposed Project's CalEEMod model incorrectly allocates the shopping center land use's trips to the various categories of trip purposes, the emissions associated with these trips are underestimated and as a result, the Project's mobile-source operational emissions are underestimated. An updated CalEEMod model must be prepared in order to accurately estimate the Project's operational emissions.

Footnote:

COMMENTS AND RESPONSES

TABLE 5-1 RESPONSE TO COMMENTS

Comment # | **Comment** | **Response**

[5] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." SCAQMD, available at: http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 20

B5-35

Comment:

Unsubstantiated Application of Construction Mitigation Measures

Review of the CalEEMod output files demonstrates that the model included several unsubstantiated construction mitigation measures. As a result, the model may underestimate the Project's construction related emissions. The Project's CalEEMod output files demonstrate that the model included a 6 percent reduction from "Clean Paved Roads" and a 12 percent moisture content for "Water Unpaved Roads" (see excerpt below) (Appendix C, pp. 40, 69, 94).

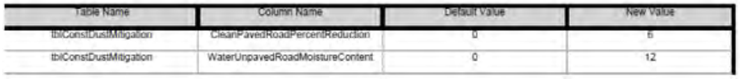

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12

As you can see in the above excerpt, the mode included 6 percent reduction in construction dust based on "Clean Paved Roads" and a 12 percent moisture content based on "Water Unpaved Roads." Furthermore, the model included the "Replace Ground Cover" mitigation measure (see excerpt below) (Appendix C, pp. 45, 74, 99).

3.1 Mitigation Measures Construction

Replace Ground Cover
Water Exposed Area
Water Unpaved Roads
Reduce Vehicle Speed on Unpaved Roads
Clean Paved Roads

As you can see in the excerpt above, the "Replace Ground Cover" mitigation measure was included in the model. As previously stated, the CalEEMod User's Guide requires that any non-default values inputted must be justified.[6] According to the "User Entered Comments & NonDefault Data" table, the justification provided for these changes is: "Per BAAQMD basic control measures" (Appendix C,

Response:

The mitigation measures included in CalEEMod are required by BAAQMD's standard dust control measures and the reduction credits used in the modeling are supported by the Western Regional Air Partnership (WRAP) Fugitive Dust Handbook (available at : https://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf)

According to the WRAP Fugitive Dust Handbook, sweeping paved roads includes a 9 to 26 percent efficiency depending on the frequency while applying water to unpaved roads is between 55 percent efficient as control for fugitive dust. These mitigation measures are standard BAAQMD Regulation 6, Rule 6: Prohibition of Trackout; SCAQMD Rule 403 and Rule 1158.

As explained below, Mitigation Measure AQ-2 has been revised to expressly include replacement of ground cover. The 5 percent efficiency in reducing fugitive dust is also supported by the WRAP Fugitive Dust Handbook and is the recommended efficiency to assume per the South Coast Air Quality Management District's Mitigation Measures and Control Efficiencies guidance for fugitive dust controls (See Table XI-A at http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies/fugitive-dust).

Overall, as discussed under Impact AQ-2 of the Draft EIR (page 4.1-17), BAAQMD does not have established numeric significance thresholds for fugitive dust. Instead, pursuant to the BAAQMD CEQA Guidelines, BAAQMD recommends implementation of Basic Construction Mitigation Measures, which would control for and reduce construction-related fugitive dust impacts to a less-than-significant level. Thus, while project construction-related fugitive dust emissions without the reduction measures for fugitive dust may be slightly higher than the fugitive dust emissions shown in Table 4.1-7 of the Draft EIR, implementation of Mitigation Measure AQ-2 to control for project construction-related fugitive dust is consistent with the BAAQMD CEQA Guidelines and would reduce the impact to a less-than-significant level.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	pp. 40, 69, 94). According to Mitigation Measure AQ-2 in the DEIR, the Project would prepare a Construction Management Plan (CMP) including the BAAQMD Basic Construction Mitigation Measures (p. 2-8, Table 2-2). However, none of these measures discusses the 6 percent or 12 percent reductions included in the model, and as a result, these reduction percentages cannot be verified. Furthermore, none of these measures address the replacement of ground cover, and as a result, the inclusion of this measure is unsubstantiated. Through the inclusion of unverified construction mitigation measures, the CalEEMod model may underestimate the Project's construction emissions and should not be relied upon to determine Project significance. Footnote: [6] "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/defaultsource/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13.	The following text revision to Chapter 4.1, Air Quality, of the Draft EIR has been made in Chapter 3 of this Response to Comments document. This revision acknowledges that additional best management practices for the replacement of groundcover is an additional construction mitigation measure recommended for projects. The revision is as follows: **Mitigation Measure AQ-2: BAAQMD Basic Construction Measures.** Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are: ▪ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ▪ All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ▪ All vehicle speeds on unpaved roads shall be limited to 15 mph. ▪ All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure ▪ Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. ▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		checked by a certified mechanic and determined to be running in proper condition prior to operation. ▪ Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. ▪ Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. ▪ All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. This revision does not affect any conclusions or significance determinations provided in the Draft EIR.
B5-36	Unsubstantiated Application of Mobile Mitigation Measures Review of the CalEEMod output files demonstrates that the model included several unsubstantiated mobile mitigation measures. As a result, the model may underestimate the Project's mobile-related operational emissions. The Project's CalEEMod output files demonstrates that the model included several mobile-related operational mitigation measures, including "Increase Density" and "Increase Diversity" (see excerpt below) (Appendix C, pp. 58, 86, 111).  **4.1 Mitigation Measures Mobile** Increase Density Increase Diversity Improve Destination Accessibility Improve Pedestrian Network	The project is a mixed-use high-density development located in an urban area. Therefore, the density and diversity measures were included in CalEEMod. The mitigated output from CalEEMod show reductions from existing regulatory requirements and project design features that are termed "mitigation" within the model; however, the modeling components associated with locational measures and compliance with existing regulations are not considered mitigation under CEQA, but rather are treated as project design features. The project would incorporate design features and would obtain benefits from its location that would reduce project vehicle miles traveled compared to default values. The measures incorporated into the CalEEMod modeling and mitigation component include: ▪ LUT-1 Increase Density: The measure encourages projects with increased densities to reduce GHG emissions associated with traffic. The project includes 25.2 dwelling units per acre. ▪ LUT-3 Increase Diversity of Land Uses: The measure requires a mix of uses on the project site in an integrated development project that encourages walking. The project includes multi-family residential, retail, and senior housing.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	As you can see in the excerpt above, the "Increase Density" and "Increase Diversity" mitigation measures were included in the model. As previously stated, the CalEEMod User's Guide requires that any non-default values inputted must be justified.[7] However, review of the "User Entered Comments & Non-Default Data" table demonstrates that no justification is provided for these measures. Furthermore, the DEIR fails to substantiate these mitigation measures. As a result, the implementation of these measures cannot be verified, and the model should not be relied upon to determine Project significance. **Footnote:** [7] "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/defaultsource/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13.	▪ **LUT-4 Improve Destination Accessibility**: The measure is based on distance to downtown or major job centers. The project is within one mile from an existing job center (CARB designated business district) in downtown Cupertino. ▪ **SDT-1 Improve Pedestrian Access**: This measure provides pedestrian access linking the project to other areas to encourage walking. The measure requires both on-site and off-site pedestrian infrastructure. The proposed project incorporates sidewalk and open areas designed to promote a pedestrian- and bicycle-friendly environment. The reductions attributable to these measures in CalEEMod are derived from methodologies compiled in the California Air Pollution Control Officers Associated (CAPCOA) report Quantifying GHG Measures.[3] Each measure was assessed to determine its consistency with CAPCOA criteria for the use of the measure.
B5-37	Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated The DEIR conducts a construction health risk assessment (HRA) and determines that the construction related health risk posed to the maximally exposed individual receptor (MEIR) would be approximately 2.23 in one million (Appendix C, p. 26). Specifically, regarding the Project's construction health risk, the DEIR states: "The highest calculated carcinogenic risk from project construction is 2.23 per million based on an annual PM10 concentration of 0.012 µg/m3" (Appendix C, p. 26). The DEIR goes on to conclude: "As described above, worst-case construction risk levels based on screening-level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds" (Appendix C, p. 26).	Please see Response to Comment B5-32 with respect to the values that are applied to the CalEEMod air quality model construction analysis. The construction HRA correctly and conservatively analyzed DPM-related health risks to off-site sensitive receptors using OEHHA and BAAQMD guidance. Please see Response to Comment B5-15 with respect to potential risk impacts of the project to off-site receptors and Response to Comment B5-16 with respect to methodology utilized for the health risk assessment.

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[3] California Air Pollution Control Officers Associated. 2010, August. Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

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However, this analysis is incorrect. As discussed above, the construction HRA relies on a flawed CalEEMod model that incorrectly underestimates construction emissions. Thus, the health risk associated with the Project's construction may also be underestimated.

Regarding the Project's operational health risk, the DEIR states, "The highest calculated carcinogenic risk as a result of the project is 9.82 per million for 70-year exposure" (Appendix C, p. 27)

However, this analysis calculated the risk posed to future sensitive receptors on the Project site as a result of the Project's close proximity to SR-85 (see excerpt below) (Appendix C, p. 28, Table 8).

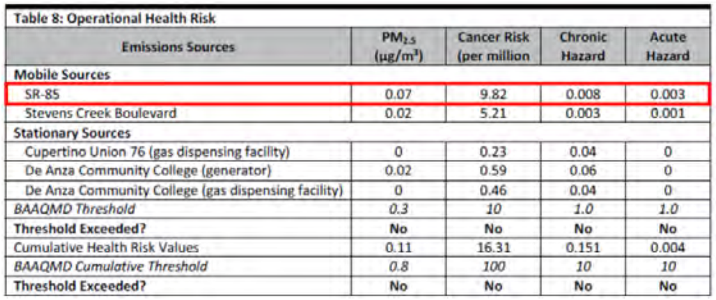

Table 8: Operational Health Risk

Emissions Sources	**$PM_{2.5}$ (μg/m³)**	**Cancer Risk (per million**	**Chronic Hazard**	**Acute Hazard**
Mobile Sources				
SR-85	0.07	9.82	0.008	0.003
Stevens Creek Boulevard	0.02	5.21	0.003	0.001
Stationary Sources				
Cupertino Union 76 (gas dispensing facility)	0	0.23	0.04	0
De Anza Community College (generator)	0.02	0.59	0.06	0
De Anza Community College (gas dispensing facility)	0	0.46	0.04	0
BAAQMD Threshold	*0.3*	*10*	*1.0*	*1.0*
Threshold Exceeded?	**No**	**No**	**No**	**No**
Cumulative Health Risk Values	0.11	16.31	0.151	0.004
BAAQMD Cumulative Threshold	*0.8*	*100*	*10*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Thus, the DEIR failed to conduct an HRA quantifying the risk posed to nearby, existing sensitive receptors as a result of the Project's operation. By failing to prepare an operational HRA to nearby, existing sensitive receptors, the DEIR is inconsistent with recommendations set forth by the Office of Environmental Health and Hazard Assessment's (OEHHA) most recent Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, which was cited in the DEIR (Appendix C, p. 26).[8] This guidance document describes the types of projects that warrant the

TABLE 5-1 RESPONSE TO COMMENTS

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	preparation of a health risk assessment.[9] Once construction of the Project is complete, the Project will operate for a long period of time. During operation, the Project will generate vehicle trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).[10] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, health risks from Project operation should have also been evaluated by the DEIR, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. These recommendations reflect the most recent health risk policy, and as such, an updated assessment of health risks posed to nearby sensitive receptors from Project operation should be included in a revised CEQA evaluation for the Project. Finally, the DEIR fails to sum the cancer risk calculated for each age group. According to OEHHA guidance, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."[11] However, review of the construction HRA conducted in the DEIR demonstrates that, while each age bin was calculated, the DEIR failed to sum them to evaluate the total cancer risk over the course of the Project's lifetime, including both construction and operation. This is incorrect and thus, an updated analysis should quantify the Project's construction and operational health risks and then sum them to compare to the BAAQMD threshold of 10 in one million.[12] Footnotes: [8] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf	

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	[9] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf [10] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-6, 8-15. [11] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4 [12] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en	
B5-38	Screening-Level Assessment Indicates Significant Impact In an effort to demonstrate the potential health risk posed by Project construction and operation to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, provide substantial evidence that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact that was not previously identified. In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model. [13] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[14] and the California Air Pollution Control Officers Associated (CAPCOA) [15] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.	As stated in Response to Comment B5-17, the screening-level HRA submitted by the commenter incorrectly estimates project operation-related DPM emissions based on the exhaust PM_{10} annual emission rate from the CalEEMod annual output file prepared for the Draft EIR. The approach taken by the commenter is incorrect because the predominant emission sources associated with the proposed land uses would be natural gas combustion associated with building energy use and gasoline-fueled passenger cars, not diesel-fueled trucks. For these reasons, the exhaust PM_{10} emissions from the operational CalEEMod annual output cannot be directly correlated to DPM for the purposes of an HRA. Therefore, due to the incorrect approach taken by the commenter, the basis of commenter's assertion that operation of the proposed project could result in a potentially significant health risk impact is also incorrect, not applicable, and not relevant.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	We prepared a preliminary HRA of the Project's construction and operational health-related impact to sensitive receptors using the annual PM10 exhaust estimates from the SWAPE annual CalEEMod output files. According to the Air Quality Assessment, the closest residential receptor is located approximately 90 feet, or 27 meters, north of the Project site (p. 4.1-10, Table 4.1-5). Consistent with recommendations set forth by the 2015 OEHHA guidance cited in the DEIR, we assumed that residential exposure begins during the third trimester stage of life. The SWAPE construction CalEEMod output files indicate that construction activities will generate approximately 464 pounds of DPM over the approximately 730-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation: $Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{463.8\ lbs}{730\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.003336\ g}$ Using this equation, we estimated a construction emission rate of 0.003336 grams per second (g/s). Subtracting the 730-day construction duration from the total residential duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DPM for an additional 28 years. SWAPE's updated operational CalEEMod emissions indicate that operational activities will generate approximately 71 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation: $Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{71.4\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.001027\ g}$	

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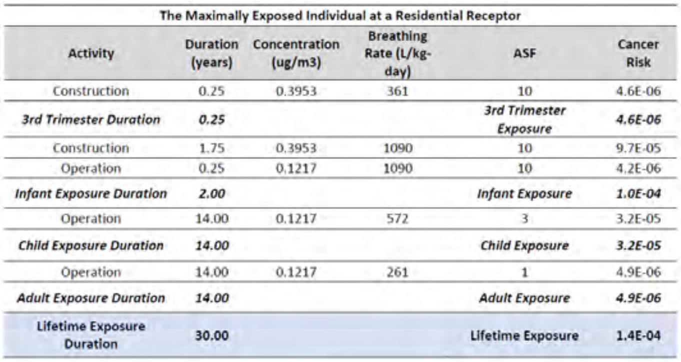
TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	Using this equation, we estimated an operational emission rate of 0.00012 g/s. Construction and operational activity was simulated as an 8.1 -acre rectangular area source in AERSCREEN with dimensions of 264 meters by 124 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. Footnotes: [13] "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, available at: http://www.epa.gov/ttn/scram/guidance/clarification /20110411_AERSCREEN_Release_Memo.pdf [14] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf [15] "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, available at: http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf	
B5-39	The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[16] As previously stated, there are residential receptors located approximately 25 meters from the Project boundary. However, the maximally exposed receptor, according to AERSCREEN, is located 125 meters from the Project site. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.953 µg/m3 DPM at approximately 125 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3953 µg/m3 for Project construction at the maximally exposed sensitive receptor. For Project operation, the single-hour concentration estimated by AERSCREEN is 1.217 µg/m3 DPM at approximately 125 meters	Please see Response to Comment B5-17 with respect to an operational HRA analysis for existing off-site sensitive receptors. As explained in Response to Comment B5-17, the screening-level HRA submitted by the commenter incorrectly estimates project operation-related DPM emissions based on the exhaust PM_{10} annual emission rate from the CalEEMod annual output for the proposed project. This approach is incorrect because the predominant emission sources associated with the proposed land uses would be gasoline-fueled passenger cars, not diesel-fueled trucks, and natural gas combustion associated with building energy use. For these reasons, the exhaust PM_{10} emissions from the operational CalEEMod annual output cannot be directly correlated to DPM for the purposes of an HRA. Therefore, due to this incorrect approach taken by the commenter, the basis of commenter's assertion that operation of the proposed project could result in a potentially significant health risk impact is also incorrect, not applicable, and not relevant.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.1217 µg/m3 for Project operation at the maximally exposed sensitive receptor. Consistent with the most recent OEHHA guidance, as cited by the DEIR, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution (Appendix C, p. 26).[17] According to the most updated guidance, quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). Furthermore, in accordance with the OEHHA guidance, we used the 95th percentile breathing rates for infants.[18] We used a cancer potency factor of 1.1 (mg/kg-day)-1 and an averaging time of 25,550 days. OEHHA recommends that a 30-year exposure duration be used as the basis for estimating cancer risk at the MEIR.[19] Also consistent with OEHHA guidance, exposure to the MEIR was assumed to begin in the third trimester to provide the most conservative estimate of air quality hazards. Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 0.85 for the 3rd trimester and infant receptors, 0.72 for child receptors, and 0.73 for adult receptors.[20] The results of our calculations are shown below. 	There are no other on-site operational uses that would generate substantial DPM emissions. The project is not considered to be a substantial source of diesel particulate matter warranting an operational HRA.

The Maximally Exposed Individual at a Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk
Construction	0.25	0.3953	361	10	4.6E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***4.6E-06***
Construction	1.75	0.3953	1090	10	9.7E-05
Operation	0.25	0.1217	1090	10	4.2E-06
Infant Exposure Duration	***2.00***			***Infant Exposure***	***1.0E-04***
Operation	14.00	0.1217	572	3	3.2E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***3.2E-05***
Operation	14.00	0.1217	261	1	4.9E-06
Adult Exposure Duration	***14.00***			***Adult Exposure***	***4.9E-06***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**1.4E-04**

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	As indicated in the table above, the excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 25 meters away, over the course of Project construction and operation, are approximately 4.9, 32, 100, and 4.6 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor is approximately 140 in one million, thus resulting in a potentially significant health risk impact not previously addressed or identified by the DEIR. An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. [21] The purpose of the screening-level construction HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level construction HRA indicates a potentially significant impact, the City should prepare an EIR with a revised HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined health risk assessment which adequately and accurately evaluates health risk impacts associated with both Project construction and operation. Footnotes: [16] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, available at: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; see also "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 4-36.	

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	[17] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. [18] "Air Toxics NSR Program Health Risk Assessment Guidelines." BAAQMD, December 2016, available at: http://www.baaqmd.gov/~/media/files/planning-and-research/permitmodeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, p. 3. "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf [19]"Risk Assessment Guidelines Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-6. [20] "Air Toxics NSR Program Health Risk Assessment Guidelines." BAAQMD, December 2016, available at: http://www.baaqmd.gov/~/media/files/planning-and-research/permitmodeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, p. 4-5.21 [21] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5	
B5-40	Greenhouse Gas Failure to Adequately Evaluate Greenhouse Gas Impacts The DEIR concludes that the Project's GHG impact would be less than significant based on the BAAQMD bright-line threshold of 1,100 MT CO2e/year, stating: "The proposed project would not result in an increase in GHG emissions that exceed the BAAQMD's bright-line screening threshold of 1,100 MTCO2e per year" (4.5-17). Furthermore, the DEIR relies upon the Project's consistency with CARB's 2017 Scoping Plan, MTC/ABAG's Plan Bay Area 2040, and the Cupertino CAP (p. 4.5-17, 4.5-18, 4.5-19). However, this analysis and subsequent less than significant impact conclusion is incorrect for several reasons: (1) CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040 cannot be relied upon to determine Project significance; (2) The DEIR fails to demonstrate consistency with the Cupertino CAP;	This comment serves as an introduction to the comments that follow. Please see Responses to Comments B5-41 through B5-44.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	(3) The DEIR relies upon an outdated and inapplicable threshold; and (4) The DEIR's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;	
B5-41	(1) CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040 are not Climate Action Plans (CAPs) The DEIR determines that the Project demonstrates consistency with CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040. However, this does not qualify as Climate Action Plan (CAP). CEQA Guidelines § 15064.4(b)(3) allows a lead agency to consider "[t]he extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b))" (Emph. added). When adopting this language, the California Natural Resources Agency ("Resources Agency") explained in its 2018 Final Statement of Reasons for Regulatory Action ("2018 Statement of Reason")[22] that it explicitly added referenced to section 15183.5(b) because it was "needed to clarify that lead agencies may rely on plans prepared pursuant to section 15183.5 in evaluating a project's [GHG] emissions …[and] consistent with the Agency's Final Statement of Reasons for the addition of section 15064.4, which states that 'proposed section 15064.4 is intended to be read in conjunction with . . . proposed section 15183.5. Those sections each indicate that local and regional plans may be developed to reduce GHG emissions.'" 2018 Final Statement of Reason, p. 19 (emph. added); see also 2009 Final Statement of Reasons for Regulatory Action, p. 27.[23] When read in conjunction, CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear qualified GHG reduction plans (also commonly referred to as a Climate Action Plan ["CAP"]) should include the following features:	The commenter incorrectly asserts the purposes of the analyses of project consistency with the CARB Scoping Plan and MTC/ABAG Plan Bay Area 2040 are to serve as climate action plans (CAP) for the City. These two plans are meant not to serve as climate action plans, but are the statewide and regional plans to reduce GHG emissions in the state. The CARB Scoping Plan is the overall statewide plan to reduce GHG emissions arising from the requirements of Assembly Bill 32 and Senate Bill 32. The MTC/ABAG Plan Bay Area 2040 is required under Senate Bill 375 and serves as the ABAG region's transportation plan/sustainable communities strategy. Accordingly, these two plans are relevant to the discussion of Impact GHG-2 in the Draft EIR, which concerns whether the project "would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs." (See CEQA Guidelines Appendix G, Section VIII.b).) The Draft EIR discusses the consistency of the project with the City of Cupertino CAP discussed in Impact GHG-2. Furthermore, as stated in Response to Comment B5-42, this discussion has been revised to include this analysis in matrix format in Table 4.5-7, City of Cupertino Climate Action Plan Consistency Analysis, as shown in Chapter 3 in this Response to Comments Document. This revision does not affect any conclusions or significance determinations provided in the Draft EIR. The EIR describes the CEQA Guidelines Section 15138.5 streamlining provisions for qualified GHG reduction plans on pages 4.5-12 and 4.5-13, but it does not rely on these streamlining provisions.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	(1) Inventory: Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction); (2) Establish GHG Reduction Goal: Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable; (3) Analyze Project Types: Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area; (4) Craft Performance Based Mitigation Measures: Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level; (5) Monitoring: Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels; The above-listed CAP features provide the necessary substantial evidence demonstrating a project’s incremental contribution is not cumulative considerable, as required under CEQA Guidelines § 15064.4(b)(3).[24] Here, however, the DEIR fails to demonstrate that the CARB’s 2017 Scoping Plan and MTC/ABAG’s Plan Bay Area 2040 include the above-listed requirements to be considered a qualified CAPs for the City. As such, the DEIR leaves an analytical gap showing that compliance with said plans can be used for a project-level significance determination. Thus, the DEIR’s GHG analysis regarding the CARB’s 2017 Scoping Plan and MTC/ABAG’s Plan Bay Area 2040 should not be relied upon to determine Project significance. **Footnotes:** [22] Resources Agency (Nov. 2018) Final Statement of Reasons For Regulatory Action: Amendments To The State CEQA Guidelines, http://resources.ca.gov/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf.	

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TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	[23] Resources Agency (Dec. 2009) Final Statement of Reasons for Regulatory Action, p. 27 ("Those sections each indicate that local and regional plans may be developed to reduce GHG emissions. If such plans reduce community-wide emissions to a level that is less than significant, a later project that complies with the requirements in such a plan may be found to have a less than significant impact."), http://resources.ca.gov/ceqa/ docs/Final_Statement_of_Reasons.pdf. [24] See Mission Bay Alliance v. Office of Community Investment & Infrastructure (2016) 6 Cal.App.5th 160, 200-201 (Upheld qualitative GHG analysis when based on city's adopted its greenhouse gas strategy that contained "multiple elements" of CEQA Guidelines § 15183.5(b), "quantification of [city's] baseline levels of [GHG] emissions and planned reductions[,]" approved by the regional air district, and "[a]t the heart" of the city's greenhouse gas strategy was "specific regulations" and measures to be implemented on a "project-by-project basis … designed to achieve the specified citywide emission level.").	
B5-42	(2) The DEIR Fails to Demonstrate Consistency with the Cupertino CAP As discussed above, the DEIR relies upon the Project's consistency with the Cupertino CAP to determine that the Project's GHG impact would be less than significant. Specifically, the DEIR states, "As an infill redevelopment priority housing development on a designated PDA and TPA the proposed project would be consistent with the overall intent of the CAP to support reductions in GHG emissions and the proposed project would not conflict any goals or measures to reduce GHG emissions in the CAP and impacts would be less than significant" (emphasis added) (p. 4.5-19). However, while the DEIR describes how the Project would be consistent with the "overall intent" of the Cupertino CAP by not conflicting with several community-wide measures, the DEIR fails to address consistency with all community-wide measures listed in the CAP (p. 4.5-19). In addition, the CAP fails to provide specific, project-level measures. Specifically, the DEIR lists several measures from the Cupertino CAP to demonstrate compliance, however, review of the Cupertino CAP reveals that these measures are "community-wide reduction measures."[25] Thus, the DEIR incorrectly relies on "community-wide" measures, rather than specific project-level measures, to determine compliance with the CAP.	The City of Cupertino CAP does not currently include specific project-level measures with which individual projects need to comply. Rather, the CAP includes community wide strategies for the City to implement to reduce GHG emissions in addition to measures that apply to municipal operations. Thus, the project consistency to the CAP as discussed under Impact GHG-2 of the Draft EIR included a discussion comparing project design features to these community-wide measures. In addition, as recommended by the commenter, the discussion pertaining to consistency of the project to the City's CAP has been revised to include the consistency analysis that evaluates consistency of the project to all of the CAP's community-wide measures in a matrix format (Table 4.5-7). As shown in Chapter 3 of this Response to Comments Document, Chapter 4.5, Greenhouse Gas Emissions, has been revised to include Table 4.5-7, City of Cupertino Climate Action Plan Consistency Analysis. This revision does not affect any conclusions or significance determinations provided in the Draft EIR. Please see Response to Comment B5-41.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	Notwithstanding the DEIR's reliance on inapplicable "community-wide" measures, the DEIR fails to demonstrate consistency with all of the CAP's "community-wide" measures (see table below). *[The commenter provides a DEIR consistency analysis of the community-wide measures in the Cupertino CAP. Please see Comment Letter B5, pages 36 to 40.]* As you can see in the table above, the DEIR fails to provide sufficient information and analysis, or reconcile Project inconsistencies with various measures under the Cupertino CAP. As a result, we cannot verify that the Project would be fully consistent with the Cupertino CAP, and Project's GHG analysis should be relied upon to determine Project significance. **Footnote:** [25] " Climate Action Plan." City of Cupertino, January 2015, available at: https://www.cupertino.org/home/showdocument?id=9605, p. 68.	
B5-43	(3) The DEIR Relies Upon an Outdated and Inapplicable Threshold In an effort to evaluate Project emissions, the DEIR includes a quantification of the Project's estimated emissions and compares them to the BAAQMD's bright-line screening threshold of 1,100 metric tons of CO_2 equivalents per year (MT CO_2e/year). Based on this evaluation, the DEIR concludes that Project's net GHG emissions would be approximately 359 MT CO2e, which would not exceed the BAAQMD's brightline screening threshold. The DEIR thus concludes that "project related GHG emissions would be less than significant" (p. 4.5-17) (see excerpt below) (p. 4.5-17, Table 4.5-6).	The BAAQMD project-level operational threshold of significance for GHG emissions is whether the project would generate 1,100 MTCO_2e per year during operations. This bright-line numeric threshold is used as a *de minimus* threshold to determine if the proposed project has the potential to result in a substantial increase in GHG impacts. Projects that do not exceed the *de minimus* threshold do not have a significant impacts. This threshold is consistent with the thresholds used by other air districts in California to assess GHG impacts. The following air districts have similar *de minimus* thresholds. ▪ The South Coast Air Quality Management District (SCAQMD) has a threshold of 3,000 MTCO_2e for projects. ▪ The Sacramento Metro Air Quality Management District (SMAQMD) has a threshold of 1,100 MTCO_2e. ▪ The San Luis Obispo Air Pollution Control District (SLOCAPCD) uses 1,150 MTCO_2e.

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TABLE 5-1 RESPONSE TO COMMENTS

Comment # Comment

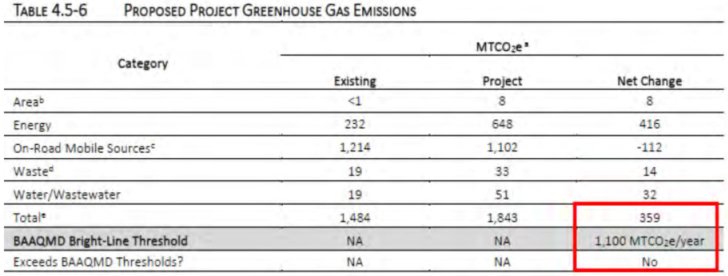

TABLE 4.5-6 PROPOSED PROJECT GREENHOUSE GAS EMISSIONS

Category	MTCO$_2$e [a]		
	Existing	Project	Net Change
Area[b]	<1	8	8
Energy	232	648	416
On-Road Mobile Sources[c]	1,214	1,102	-112
Waste[d]	19	33	14
Water/Wastewater	19	51	32
Total[e]	1,484	1,843	359
BAAQMD Bright-Line Threshold	NA	NA	1,100 MTCO$_2$e/year
Exceeds BAAQMD Thresholds?	NA	NA	No

As the above excerpt demonstrates, the DEIR compared the Project's quantified GHG emissions to the BAAQMD's bright-line screening threshold of 1,100 MT CO2e/year. However, the DEIR's use of this threshold is incorrect, as the threshold was developed for the air district's planned reductions for 2020, and thus, only applies to projects that will be operational by 2020.[26] According to the DEIR, "[c]onstruction of the proposed project would occur in two phases over a 16-month period and is anticipated to be completed by the year 2023" (p. 3-27). As such, the BAAQMD's bright-line screening threshold for 2020 would not apply to the proposed Project, which is not anticipated to become operational until 2023.

Footnote:

[26] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p.D-20.

Response

In impact discussion GHG-2, the EIR evaluates the consistency of the project with plans adopted for the purpose of reducing GHG emissions separate from the quantitative analysis. As indicated in the comment and described in the Draft EIR, statewide goals for GHG reductions beyond 2020 were codified into state law with the passage of SB 32. Although the Cupertino CAP was drafted before SB 32, the CAP addresses emissions beyond 2020 as informed by the post-2020 GHG reduction targets of Executive Order S-3-05. To demonstrate consistency with the state's long-range target, this CAP includes targets for 2050, as well as interim year 2035 targets to serve as a midpoint check-in between 2020 and 2050. Based on the state's 2050 target and the fact that the CAP uses a 2010 baseline year, Cupertino has defined its longer-term targets as 49 percent below baseline levels by 2035 and 83 percent below baseline levels by 2050. Therefore, project compliance with the CAP adequately establishes project compliance not only with statewide GHG reduction goals for the year 2020 associated with AB 32, but also with statewide GHG reduction goals for the years beyond 2020. The project includes a number of sustainable design features such as 10 percent of multi-family parking spaces would be EV spaces, PV cells for on-site electricity production, insulated doors and windows, and roof and balcony overhangs to provide shading that are consistent with the overall goals in the City's CAP.

Furthermore, the Draft EIR conservatively evaluated project GHG emissions by not taking credit for the fact that the project would use electricity from a Community Choice Aggregator (CCA). Silicon Valley Clean Energy CCA (SVCE) is the primary provider for the City of Cupertino working in partnership with PG&E. SCVE purchases clean electricity directly from the source while PG&E delivers the electricity over existing power lines, continues to maintain the lines, and provides billing and customer service. SCVE can provide lower generation charges while providing a cleaner energy source. Approximately 50 percent of the energy source is from renewable energy sources such as wind and solar power, while 50 percent is non-polluting hydroelectric. Between clean energy and various sustainable design features included in the project, energy use would be zero. Implementation of the project would result in a net reduction of GHG emissions from existing conditions of

TABLE 5-1 RESPONSE TO COMMENTS

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		57 $MTCO_2e$ annually due to use of carbon neutral electricity sources. In addition, the analysis presented in the Draft EIR conservatively compares the project to a baseline of only 85 percent occupancy of the existing site, even though the retail component of the project could be occupied at any time; and has been fully occupied in the past. If 100 percent occupancy of site was considered in the CEQA analysis, as permitted under CEQA, the project would result in further reductions in GHG emissions compared to existing conditions.
B5-44	(4) The DEIR's GHG Analysis Relies Upon an Incorrect and Unsubstantiated Air Model In addition to the DEIR's inability to rely on various plans and policies to demonstrate less than significant GHG impacts, the DEIR utilizes an incorrect CalEEMod to analysis the Project's GHG impact. As discussed above, the DEIR's CalEEMod model relies upon incorrect input parameters to estimate the Project's criteria air pollutant and GHG emissions, resulting in an underestimation of Project emissions. Therefore, we find the DEIR's quantitative GHG analysis to be incorrect and unreliable. An updated EIR should be prepared, using correct, project-specific modeling to adequately assess and mitigate the Project's GHG impact.	Please see Response to Comment B5-32, which explains the commenter has misinterpreted the size of the underground parking structure, Response to Comment B5-33, which explains the commenter has misinterpreted the weekday trips to be the same as weekend trips, and Response to Comment B5-34 with respect to the use of pass-by trips in the model.
B5-45	SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.	This comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Draft EIR, nor does the comment raise a new environmental issue.

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B5-46	Resume of Matthew F Hagemann	The attachment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Final EIR for their consideration in reviewing the project.
B5-47	Resume of Paul Rosenfeld	The attachment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Final EIR for their consideration in reviewing the project.
B5-48	Aerscreen 16216 Data for Westport Construction	The attachment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Final EIR for their consideration in reviewing the project.
B5-49	Aerscreen 16216 Data for Westport Operation	The attachment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Final EIR for their consideration in reviewing the project.
B5-50	CalEEMod inputs and results dated 12/16/19	The attachment is acknowledged for the record and will be forwarded to the decision-making bodies as part of this Final EIR for their consideration in reviewing the project.
B5-51	**Exhibit B – Smith Engineering & Management** Dear Mr. Messing: Per your request, I reviewed the Draft Environmental Impact Report (the "DEIR") for the Westport Mixed Use Project, located in Cupertino (the "City"). My review is specific to the Transportation and Circulation matters. My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and parking field. I have both prepared and reviewed the transportation and circulation sections of CEQA environmental review documents. My professional resume is attached hereto. My technical comments follow.	The comment serves as an opening remark. No response is required.

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Comment #	Comment	Response
B5-52	The DEIR Project Description is Incomplete The DEIR's project description does not include any discussion of the types of retail that would be included in the Project. The existing shopping plaza, which contains many local serving uses like cheap restaurants, dentists, nail shops, and dance studios, attracts considerably more local trips than a shopping center that has specialty shops that people drive for longer distances to get to. These differences in retail may significantly increase the VMT and GHG impacts of the project and without more information, the DEIR cannot make reliable conclusions as to those impacts. Please confirm what elements of local data and what default data were used in the VMT analysis.	Please see Response to Comment B5-8 regarding the project description and types of retail anticipated at the project site. As stated in that response, the project would provide neighborhood serving retail and not regional oriented specialty stores. CalEEMod utilizes the same trip length and parameters for non-regional shopping centers as it does for regional shopping centers. Therefore, any differences between regional and non-regional retail land uses would not generate a different VMT or GHG result since the same trip generation rate is used. Regardless, the project is proposing new local retail uses to replace existing local retail uses. As a result, there will be less local retail space with the same trip lengths generating less total VMT at the site compared to the existing shopping center.
B5-53	The DEIR Makes No Evident Assumption of Development on the Vallco Site. At the time of issuance of the Notice Of Preparation (NOP) for the Westport EIR (July 11, 2019), the Cupertino City Council had repealed the Vallco General Plan Amendment, the Specific Plan and the development agreement that had previously been adopted by the Council in September, 2018. Resolution No. 18-104 certifying the Final EIR on the Vallco site has not been subsequently repealed. While the repeal actions make certain that the Specific Plan in its proposed form will not move forward, this does not mean Vallco will remain in its substantially vacant current condition, a condition that prevailed at the time the traffic counts the Westport Project DEIR were taken. It does, however, make more likely that an alternative studied in the Vallco EIR, the Occupied / Retenanted Mall, would become the long term use. That option, would, according to the Vallco DEIR, involve 23,417 net new trips daily, including 307 in the AM peak and 2,398 in the PM peak hour that were not present when the counts supporting the Westport DEIR analysis were conducted. These are a sufficient number of trips generated close to the Westport site to alter the findings of the Westport traffic analysis. It is not clear that the	The commenter incorrectly asserts that the Draft EIR did not assume potential future development on the Vallco project site. As shown on Table 4-1, Reasonably Foreseeable Development Projects in Cupertino, in Chapter 4, Environmental Evaluation, of the Draft EIR, the proposed Westport Mixed-Use project when combined with the other reasonably foreseeable projects in Cupertino, including the Vallco project proposed at the time the Notice of Preparation was released for the proposed Westport Mixed Use project (July 11, 2019), would not exceed the maximum buildout potential evaluated in the General Plan EIR. As described in Chapter 4 of the Draft EIR, the General Plan EIR evaluated the cumulative effects of the General Plan Amendments, Housing Element Update, and Associated Rezoning using the summary of projections approach provided for in CEQA Guidelines Section 15130(b)(1)(B). The General Plan EIR took into account growth from the General Plan within the Cupertino city boundary and Sphere of Influence (SOI), in combination with projected growth in the rest of Santa Clara County and the surrounding region, as forecast by ABAG. At the time the Draft EIR was prepared the *Westport Cupertino – Transportation Analysis*, dated November 27, 2018 included in Appendix H of the Draft EIR, the City determined that the Cupertino General Plan EIR had the most accurate volumes for the cumulative 2040 scenario. The future potential growth at the North Vallco Special Area was included in the cumulative 2040 scenario in the General Plan EIR.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
	Westport analysis has accounted for any revitalized use of the Vallco site.	Since the certification of the General Plan EIR in October 2015, the City has considered new future development potential at the Vallco project site. While, as shown in Table 4-1, this development at the Vallco site is consistent with the maximum buildout potential in the General Plan EIR for citywide cumulative discussions (e.g., population and housing, water supply, etc.), the General Plan EIR analyzed cumulative impacts citywide at a program level, but did not evaluate localized cumulative impacts, such as traffic, traffic related noise, and utilities infrastructure, in the vicinity of the Westport Mixed-Use Project site. Accordingly, the cumulative impacts to which the proposed Westport Mixed-Use Project would contribute are analyzed in this EIR. The City and staff at Hexagon Transportation Consultants, the transportation expert hired by the City to evaluate the transportation impacts of the proposed project, determined that due to the distance between the proposed Westport Mixed-Use Project site and the Vallco site, however, which is approximately 2 miles to the east of the project site, no localized cumulative impacts related to utilities (infrastructure), traffic, or traffic related noise would occur. With respect to traffic volumes, because the total of reasonably foreseeable projects shown in Table 4-1 (described above) combined with the proposed project (Westport Mixed Use Project) would not exceed the growth evaluated in the General Plan EIR, the city-wide, regional, and global impacts were appropriately accounted for in the Draft EIR for the proposed Westport Mixed-Use Project. As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 under General Plan buildout conditions. The proposed project would construct 242 residential units and 20,000 square feet of retail space, which is consistent with the land use evaluated in the General Plan EIR, and therefore, would not directly result in any additional new population growth or employment growth beyond what was analyzed in the General Plan EIR. As described in Chapter 3, Project Description, of the Draft EIR, in Section 3.4.3, Population and Employment Projections, the proposed project would add 695 new residents and 70 new employees for a total of 765 people, generating a total of 2,663,868 vehicle miles annually. Therefore, the proposed project would have a VMT impact of 3,482 vehicle

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		miles per capita annually or 9.54 daily vehicle miles per day. As discussed in the General Plan EIR, the VMT per capita is projected to increase from 10.5 to 10.9 under General Plan buildout conditions. Therefore, the project is below the City's VMT per capita values. Accordingly, the proposed Westport Mixed-Use project would be consistent with and would have no effect on the VMT analysis presented in the General Plan EIR. As described in Chapter 4, Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. When the combined cumulative impact caused by the project's incremental effect and the effects of other projects is not significant (i.e., not cumulatively considerable), the EIR must briefly indicate why the cumulative impact is not significant. In this case, because the proposed Westport Mixed-Use project is substantially smaller than the potential future development on the Vallco site, it is the incremental effect of the potential future development on the Vallco site that could be cumulatively considerable, although it is not in this case, and not the other way around. For example, the total *Cumulative with Proposed Project* AM volumes from the Vallco study at the Stevens Creek/SR 85 NB Ramps intersection minus the total *Background* AM volumes is 589 trips. This is the total number of AM peak hour trips at the intersection generated by all the pending projects in the area that were considered in the Vallco traffic impact assessment, including the Westport Mixed-Use Project and Vallco trips. The Westport Mixed-Use Project would add 48 new AM peak hour vehicle trips to the intersection. Based on 589 total AM peak hour trips, the Westport Mixed-Use Project accounts for only 8.15 percent of all the pending project AM peak hour trips added to the intersection. It should also be noted that if the other cumulative scenarios that were evaluated in the Vallco traffic analysis, including *Cumulative with General Plan Buildout with Max Residential Alternative* and the *Cumulative with Retail and Residential Alternative* are considered, the percentage of AM peak hour trips at the intersection attributable to the Westport Mixed-Use Project would be even less.

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		Also, please see Response to Comment B5-25.
B5-54	The Summary Reporting of the VMT Analysis Raises Questions The DEIR discloses that the Project's vehicle miles traveled generation (VMT) was analyzed using the CAEEMOD, an air pollutant prediction model, and that the Project would reduce VMT generated by development at the site by 120,000 miles annually or 327 per day, as compared to a continuation of the existing use of the site. This seems logical in that the small reduction in the net daily trips generated at the site would be expected to reduce VMT by a small number of miles per day. However, neither the Transportation section of the DEIR nor its Appendix H Transportation Analysis presents the CAEEMOD run sheets for inspection. All that is presented is a summarization of the model outcomes with respect to VMT. Since CAEEMOD is known to have generalized default values for trip generation and average trip length for various land uses for which superior current and local values for trip generation and average trip length can be substituted, it is important for the public to understand whether data from local traffic models has been employed or the outcome is just the product of default values. The must clarify whether local values have been substituted for default values and if not, why not. We do note that there are CAEEMOD run sheets located in Appendix C and that the weekday trip generation in them appears to be consistent with the trip generation analysis contained in the transportation section. However, other aspects like trip length or trip purpose may be default values.	The CalEEMod outputs are included in Appendix E, Greenhouse Gas Emissions, of the Draft EIR.
B5-55	Conclusion This completes my current comments on the Westport Mixed Use Project DEIR. For the reasons stated above, the DEIR is inadequate and must be revised and recirculated in draft status.	The comment serves as a closing remark. No response is required. With respect to recirculation, please see Response to Comment B5-5.

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Comment #	Comment	Response
B6 Michelle Dunn, December 23, 2019		
B6-1	Overall the Initial Study (IS) and Environmental Impact Report (EIR) for the Westport Mixed-Use Project is well written from a CEQA standpoint. I mostly have non-CEQA questions and comments for the City as a whole and some more project-related information seeking comments/questions.	The comment serves as an opening remark. No response is required.
B6-2	Schools Cupertino is a residential city with pockets of office spaces. CUSD is one of the largest school districts in Northern California. Even though we are in a highly affluent area, the high enrollment coupled with the low-incoming enrollment due primarily to the high-cost of living and home prices is causing financial difficulties and skewed enrollment at schools for CUSD (some school enrollment is super high, others it's dwindling due to low incoming enrollment). Will this project help the CUSD problem or make it worse? Even though the developer pays developer fees to CUSD, there is a cap on the amount of fees CUSD can acquire due to SB 50. It doesn't look like the City of Cupertino has any significant goals or policies in the General Plan to encourage more collaboration with CUSD or FUHSD when it comes to development.	The commenter expresses an opinion about the schools in the Cupertino Unified School District and the Cupertino General Plan. The commenter's observations are noted.
B6-3	Parking The only definitive mention of parking is for bicycle parking (117 bicycle parking spaces). A single-level underground parking lot is mentioned along with density bonuses and such which are factored into the total parking spaces. There is no mention of the total number of parking spaces proposed. There is no discussion on Parking. Although not a CEQA-specific issue per se, this is a concern. Will there be enough spaces for the 242 residential units? There are 88 units (19 rowhouses and 69 townhomes) that will have their own garage. This brings the number of units using the underground parking to 154 residential units. Will there be enough parking provided for the proposed residential units on-site? How many parking spaces are proposed?	As described on pages 30 and 31 of Appendix A, Initial Study, of the Draft EIR, CEQA Section 21099(d)(1) states "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." The proposed project would be located on an infill site, would be a mixed-use residential project, and would be located in a transit priority area. Accordingly, the Draft EIR did not consider parking in determining if the proposed project has the potential to result in significant environmental effects. The proposed project would be required to provide parking pursuant to the Cupertino Municipal Code.

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B6-4	Traffic and Pedestrians along Mary Avenue There is an existing blind curve on Mary Avenue where there is an existing pedestrian crosswalk with a signal. With this project, traffic will increase and only exacerbate safety issues for those crossing Mary Ave. Will this signalized pedestrian crossing be maintained or improved?	The commenter expresses an opinion about the existing conditions in the project vicinity and asserts that the operation of the proposed project will create worse conditions on the pedestrian crossing on Mary Avenue in the vicinity of the project site. The commenter provides no substantial evidence to support their assertion. No changes to the existing pedestrian crosswalk on Mary Avenue, which includes flashing beacons, are proposed as part of the project. As discussed in Chapter 4.8, Transportation, of the Draft EIR, the proposed project is expected to increase the number of pedestrians using the existing sidewalks and crosswalks by approximately 20 percent. Impact discussion TRANS-1, Pedestrian Facilities (page 4.8-21) concludes that the proposed project would not impede any existing pedestrian facilities. In addition, as discussed in Chapter 4.8, the proposed project would generate overall less traffic than the existing conditions. Sight distance requirements vary depending on the roadway speeds. For Mary Avenue, which has a posted speed limit of 35 mph, the Caltrans stopping sight distance is 300 feet (based on a design speed of 40 mph). Thus, a driver on Mary Avenue must be able to see a pedestrian crossing at the marked crosswalk at least 300 feet away to have adequate time to stop. Currently, over 300 feet of stopping sight distance is provided along southbound Mary Avenue at the horizontal curve. Although there are trees located along the site frontage on Mary Avenue at the curve, the trees have a high canopy and do not limit sight distance. Thus, adequate sight distance currently exists and would continue to exist along Mary Avenue at the horizontal curve and crosswalk.
B6-5	Traffic along Stevens Creek Boulevard Currently, during morning hours (especially during the hours to take school-aged children to school between 7:45 a.m. and 9:00 a.m.), there is a backup along westbound Stevens Creek Boulevard. There is an existing exit lane to the freeway-onramp which becomes congested when vehicles try to turn right onto Stevens Creek Boulevard through lanes (the first and second lanes). What traffic calming measures will be implemented to help ease this existing congestion? Development of this project would increase traffic along this roadway. Is there space along Mary Avenue to have two right turn lanes onto Stevens Creek	The commenter expresses an opinion about existing conditions and asserts that traffic will increase on Mary Avenue, but there is no evidence to support this assertion. Transportation impacts resulting from the proposed project are discussed in Chapter 4.8, Transportation, of the Draft EIR beginning on page 4.8.15. As discussed in Chapter 4.8 construction and operation of the proposed project would not result in any significant transportation queuing impacts on Stevens Creek Boulevard or the SR-85 on- and off-ramps. As discussed in Chapter 4.8, the proposed project would

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	Boulevard? One right turn lane for through traffic and one right turn lane for freeway-onramp only traffic that could be utilized specifically during the morning hours?	generate overall less traffic than the existing conditions. Therefore, no traffic calming features are required to mitigate an impact. Providing two southbound right-turn lanes on Mary Avenue is not feasible because adequate right-of-way does not exist. It would also introduce a weaving situation along Stevens Creek Boulevard, creating a potential operational issue that does not currently exist.
Private Individuals and Organizations		
C1 Summary of Comments Received at the Public Meeting, Wednesday, December 11, 2019 at the Cupertino Senior Center		
C1-1	Existing Conditions Participants asked if the EIR evaluates the change on-site as the Oaks Shopping Plaza being at full occupancy or as it is now.	As described in Chapter 3, Project Description, of the Draft EIR, in Section 3.2.4.1, on page 3-5, the existing shopping center is approximately 71,250 square feet and is about 85 percent occupied (or 60,560 square feet). The Draft EIR evaluates impacts consistent with the guidance in CEQA Guidelines Section 15125(a), which states that the information available at the time of the NOP will normally constitute the physical baseline conditions for purposes of determining whether there will be a significant impact.
C1-2	Traffic Commenters expressed concerns about the following: ▪ Parking on Mary Avenue during events at Memorial Park Events and questioned if the EIR evaluated the impacts to parallel parking and buses on Mary Avenue. ▪ How traffic patterns are measured? ▪ Will new trips effect the traffic pattern? ▪ Will the left turn from Stevens Creek Blvd onto Mary Avenue be impacted? ▪ Will the project cause more traffic to back up on Stevens Creek Boulevard? ▪ Were trips pattens evaluated using the route via Mary Avenue to Garden Gate Elementary? ▪ How were cumulative impacts measured?	▪ The proposed project does not include any changes to Mary Avenue and existing parking would remain the same. ▪ The analysis in Chapter 4.8, Transportation, of the Draft EIR is based on the *Westport Cupertino – Transportation Analysis*, dated November 27, 2018, and the *Westport Cupertino – Stevens Creek Boulevard & SR 85 On Ramp Signalization Analysis*, dated September 18, 2019, prepared by Kimley-Horn and Associates. Complete copies of these reports are provided in Appendix H, Transportation Assessment, of this Draft EIR. As described in Chapter 4.8, the traffic from future residents is expected to use the same primary roadways as under existing conditions. Traffic patterns were evaluated at the Stevens Creek Boulevard/Mary Avenue intersection #1 and Stevens Creek Boulevard and State Route 85 (SR-85) North Bound Ramp Terminal intersection #2. ▪ As described in Chapter 4.8, the proposed project would generate fewer trips than the existing development on the site and, therefore, would not have an adverse effect on existing traffic patterns.

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	▪ Will a traffic light be installed a the proposed driveway on Stevens Creek Boulevard? ▪ What is the width of the proposed driveway on Stevens Creek Boulevard? ▪ Will the proposed retail be for local residents and if so, will that reduce traffic to and from the site?	▪ The project would have no effect on the operation of the eastbound left-turn pocket on Stevens Creek Boulevard [onto Mary Avenue], because the project would generate zero net new inbound vehicle trips during both the AM and PM peak commute periods of the day. Please see Response to Comment B1-7. ▪ Site access through the adjacent neighborhood to the north via Mary Avenue is highly unlikely due to the circuitous route, which would require traveling along six different residential streets with a speed limit of 25 miles per hour, traversing multiple intersections with stop signs, and driving past Garden Gate Elementary School on Greenleaf Drive. Please see Response to Comment B1-5. ▪ As described in Chapter 4 of the Draft EIR, the General Plan EIR evaluated the cumulative effects of the General Plan Amendments, Housing Element Update, and Associated Rezoning, including development of the project site, using the summary of projections approach provided for in CEQA Guidelines Section 15130(b)(1)(B). Please see Response to Comment B5-53. ▪ There is no traffic light planned at the proposed driveway on Stevens Creek Boulevard as part of the proposed project. ▪ The proposed driveways on the project site will meet the required standards set for the Cupertino Municipal Code, including driveway width. The minimum width for two-way driveways is 24 feet in Cupertino. ▪ As described in the Project Objectives (please see page 3-11 of the Draft EIR) that the proposed project would include neighborhood retail; therefore, no regionally oriented specialty stores were assumed for the analysis presented in the Draft EIR. Please see Response to Comments B5-8.
C1-3	Air Quality and Greenhouse Gas Emissions Commenters expressed concerns about the following: ▪ Do the air quality impacts consider the on-site trees and their removal? ▪ Do the GHG emission impacts consider trips at different times of the day? ▪ Are the GHG emission standards adopted out of date?	The air quality impacts of the proposed project, which are less than significant during operation and less than significant with implementation of Mitigation Measure AQ-1 during construction, are not related to on-site trees or their removal. This is not to imply that trees do not have a relationship to air quality. Trees can provide shade that may reduce the need for air conditioning which in turn can reduce fossil fuel consumption thus improving air quality. Trees can also absorb small particulate matter from the air, which can improve air quality. However, as described in Chapter 4.1 (see page 4.1-1), the analysis in the Draft EIR is based on the methodology recommended by the Bay Area Air Quality Management District

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		(BAAQMD) for project-level review. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the proposed project. In Chapter 4.1, "emissions" refers to the actual quantity of pollutant material measured in pounds per day or tons per year, and "concentrations" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$). As discussed in Chapter 4.1, Air Quality, of the Draft EIR, the impact discussion in Chapter 4.1 (see pages 4.1-14 through 4.1-22) is based on this cumulative setting because all development within the San Francisco Bay Area Air Basin contributes to regional emissions of criteria pollutants (listed below), and basin-wide projections of emissions is the best tool for determining the cumulative effect. BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including reactive organic gases (ROG), oxides of nitrogen (NO_x), coarse inhalable particulate matter (PM_{10}), and fine inhalable particulate matter ($PM_{2.5}$). Development projects below these significant thresholds (shown in Table 4.1-6) are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. In addition to the fact that the measure of the ability of the on-site trees to effect air quality is not part of the methodology for analyzing air quality impacts, the proposed project would replace all of the trees on the project site and would also plant additional trees; therefore, there would be an increase in the number of trees on the project site. The Arborist Report (included in Appendix D of the Draft EIR) that was prepared for the project site included an evaluation of 83 trees on the project site. The proposed project would involve the removal of the existing landscaping and trees on site, with the exception of four oak trees which will be relocated on the project site and would plant approximately 400 additional trees. Therefore, any benefits that may occur from the trees on the project site would continue to occur under the proposed project. Please see Response to Comment C1-4 with respect to the removal and planting of trees. GHG emissions generated by the project cumulatively contribute to world-wide CO_2 concentrations and climate change impacts. As a result, while emissions are local, regardless of the times of the day the impacts are global in nature. GHG impacts are

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		global, and there are no localized impacts to sensitive receptors surrounding the project from project-related GHG emissions regardless of the time of day. Therefore, there are no ambient air quality standards for GHGs. With respect to the GHG emissions threshold, please see Response to Comment B5-43.
C1-4	Biological Resources Commenters expressed concerns about the following: ▪ How many trees would remain on-site? ▪ How many trees would be planted for the project? ▪ Will new trees be counted as mature trees or young trees? ▪ Will the project comply with the City policy to protect trees?	As discussed in Chapter 3, Project Description, of the Draft EIR on page 3-19 in Section 3.4.1.4. Landscaping, and page 3-27 in Section 3.4.2, Construction and Demolition the proposed project would include landscaping throughout the interior and the perimeter of the project site. See Figure 3-10. The Arborist Report (included in Appendix D of the Draft EIR) that was prepared for the project site included an evaluation of 83 trees on the project site. The proposed project would involve the removal of the existing landscaping and trees on site, with the exception of four oak trees which will be relocated on the project site and would plant approximately 400 additional trees. The City's regulations for protected trees are described on pages 4.2-3 and 4.2-4 in Chapter 4.2, Biological Resources, of the Draft EIR. As stated in impact discussion BIO-2 starting on page 4.2-11, the removal of protected trees is permitted by the City following approval of a tree removal permit. Implementation of Mitigation Measure BIO-2 would ensure compliance with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18).
C1-5	Hazards and Hazardous Materials ▪ Do the existing buildings have asbestos in them, and how will that be addressed? ▪ Will the proposed Residential-Retail Building buildings create a wind tunnel effect and is this analyzed in the DEIR.	As discussed in the Initial Study prepared for the proposed project and included in Appendix A of the Draft EIR, two Phase 1 Environmental Site Assessments (ESAs), dated March 14, 2007 and September 18, 2015, were prepared for the project site by EBI Consulting and PIERS Environmental Services, respectively.4 The Phase 1 ESA dated March 14, 2007 recommended the continued implementation of the existing asbestos Operation and Maintenance Plan due to suspected asbestos containing materials (ACM) in the floors, walls, and ceiling of the buildings. A proposed project's wind impacts are directly related to its height, orientation, design, location, and surrounding development context. The wind tunnel effect is

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[4] PIERS Environmental Services, 2015. Phase 1 Environmental Site Assessment, 21255-21275 Stevens Creek Boulevard, Cupertino, CA, dated September 18, 2015. EBI Consulting, 2007, Phase 1 Environmental Site Assessment, The Oaks Shopping Center, Cupertino, California, dated March 14, 2007.

TABLE 5-1 RESPONSE TO COMMENTS

Comment #	Comment	Response
		caused by multiple tall buildings with narrow areas between the buildings creating low-pressure which causes the wind to move faster. An area with few tall buildings (over 85 feet), such as the project site, has little potential to cause substantial changes to ground-level wind conditions. If any wind tunnel effect were to occur, this would be an effect of the project on the project and would have no off-site effects.
C1-6	Aesthetics Will the project block natural light and is this addressed in the EIR?	As discussed on pages 31 and 32 of the Initial Study prepared for the proposed project and included in Appendix A of the Draft EIR, in compliance with SB 743 no significant aesthetic impacts, including the effects of light and glare, and parking impacts shall not be considered significant effects on the environment and therefore are not discussed in the Initial Study or EIR. Please see Response to Comment B6-3.
C1-7	There is a typo on page 3-12, 1st sentence of the 2nd paragraph under section 3.4.1.1. The sentence states that something will be five stories when it should say “fifty-five.”	The text on page 3-12 is correct. The proposed Residential-Retail Building 2 would be five stories tall (55 feet at the roofline).

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6. *Mitigation Monitoring and Reporting Program*

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared for The Westport Mixed-Use Project. The purpose of the MMRP is to ensure that the mitigation measures identified in the EIR for the proposed project are implemented. The MMRP includes the following information:

- The full text of the mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring the implementation; and
- The monitoring action and frequency.

The City of Cupertino must adopt this MMRP, or an equally effective program, if it approves the proposed project with the mitigation measures that were adopted or made conditions of project approval.

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
AIR QUALITY					
Mitigation Measure AQ-2: Prior to any grading activities, the applicant shall prepare a Construction Management Plan to be reviewed and approved by the Director of Public Works/City Engineer. The Construction Management Plan shall include the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures listed below to minimize construction-related emissions. The project applicant shall require the construction contractor to implement the approved Construction Management Plan. The BAAQMD Basic Construction Mitigation Measures are: ▪ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ▪ All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ▪ All vehicle speeds on unpaved roads shall be limited to 15 mph. ▪ All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. ▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. ▪ Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This	Project Applicant/ Construction Contractor	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	City of Cupertino Public Works Department	Review Construction Plans and Specifications/ Conduct Site Inspections	During Scheduled Construction Site Inspections

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. ▪ Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. ▪ All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.					
Mitigation Measure AQ-4: Implement Mitigation Measure AQ-2.	Project Applicant/ Construction Contractor	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	City of Cupertino Public Works Department	Review Construction Plans and Specifications/ Conduct Site Inspections	During Scheduled Construction Site Inspections
BIOLOGICAL RESOURCES					
Mitigation Measure BIO-1: Nests of raptors and other birds shall be protected when in active use, as required by the federal Migratory Bird Treaty Act and the California Fish and Game Code. The construction contractor shall indicate the following on all construction plans, if construction activities and any required tree removal occur during the breeding season (February 1 and August 31). Preconstruction surveys shall: ▪ Be conducted by a qualified biologist prior to tree removal or grading, demolition, or construction activities. Note that preconstruction surveys are not required for tree removal or construction, grading, or demolition activities outside the nesting period. ▪ Be conducted no more than 14 days prior to the start of tree removal or construction. ▪ Be repeated at 14-day intervals until construction has been initiated in the area after which surveys can be stopped. ▪ Document locations of active nests containing viable eggs or young birds.	Project Applicant	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	Qualifying Biologist	Preconstruction Survey	Once for Survey; Ongoing if nesting birds identified and until they have left the nest

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
Protective measures for active nests containing viable eggs or young birds shall be implemented under the direction of the qualified biologist until the nests no longer contain eggs or young birds. Protective measures shall include: ▪ Establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest location as determined by the qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance and proximity to existing development. In general, exclusion zones shall be a minimum of 300 feet for raptors and 75 feet for passerines and other birds. ▪ Monitoring active nests within an exclusion zone on a weekly basis throughout the nesting season to identify signs of disturbance and confirm nesting status. ▪ An increase in the radius of an exclusion zone by the qualified biologist if project activities are determined to be adversely affecting the nesting birds. Exclusion zones may be reduced by the qualified biologist only in consultation with California Department of Fish and Wildlife. ▪ The protection measures shall remain in effect until the young have left the nest and are foraging independently or the nest is no longer active.					
Mitigation Measure BIO-2: The proposed project shall comply with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18). A tree removal permit shall be obtained for the removal of any "protected tree," and replacement plantings shall be provided as approved by the City. If permitted, an appropriate in-lieu tree replacement fee may be paid to the City of Cupertino's Tree Fund as compensation for "protected trees" removed by the proposed project, where sufficient land area is not available on-site for adequate replacement and when approved by the City. In addition, a Tree Protection and Replacement Program (Program) shall be developed by a Certified Arborist prior to project approval	Project Applicant	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	City of Cupertino Public Works Department	Plan Review and Approval	Once During the Preconstruction Phase and Ongoing During Construction

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
and implemented during project construction to provide for adequate protection and replacement of "protected trees," as defined by the City's Municipal Code. The Program shall include the following provisions: ▪ Adequate measures shall be defined to protect all trees to be preserved. These measures should include the establishment of a tree protection zone (TPZ) around each tree to be preserved, in which no disturbance is permitted. For design purposes, the TPZ shall be located at the dripline of the tree or 10 feet, whichever is greater. If necessary, the TPZ for construction-tolerant species (i.e., coast live oaks) may be reduced to 7 feet. ▪ Temporary construction fencing shall be installed at the perimeter of TPZs prior to demolition, grubbing, or grading. Fences shall be 6-foot chain link or equivalent, as approved by the City of Cupertino. Fences shall remain until all construction is completed. Fences shall not be relocated or removed without permission from the consulting arborist. ▪ No grading, excavation, or storage of materials shall be permitted within TPZs. Construction trailers, traffic, and storage areas shall remain outside fenced areas at all times. No excess soil, chemicals, debris, equipment, or other materials shall be dumped or stored within he TPZ. ▪ Underground services including utilities, sub-drains, water or sewer shall be routed around the TPZ. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury. Irrigation systems must be designed so that no trenching will occur within the TPZ. ▪ Construction activities associated with structures and underground features to be removed within the TPZ shall use the smallest equipment and operate from outside the TPZ. The consulting arborist shall be on-site during all operations within the TPZ to monitor demolition activity. ▪ All grading, improvement plans, and construction plans shall clearly indicate trees proposed to be removed, altered, or					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
otherwise affected by development construction. The tree information on grading and development plans should indicate the number, size, species, assigned tree number, and location of the dripline of all trees that are to be retained/preserved. All plans shall also include tree preservation guidelines prepared by the consulting arborist. ▪ The demolition contractor shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection. Prior to beginning work, the contractor(s) working in the vicinity of trees to be preserved shall be required to meet with the consulting arborist at the site to review all work procedures, access routes, storage areas, and tree protection measures. ▪ All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved. Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the consulting arborist. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied. ▪ Any plan changes affecting trees shall be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans. ▪ Trees to be preserved may require pruning to provide construction clearance. All pruning shall be completed by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the 2002 Best Management Practices for Pruning published by the International Society of Arboriculture, and adhere to the most recent editions of the American National Standard for Tree Care Operations (Section Z133.1) and Pruning (Section A300). ▪ Any root pruning required for construction purposes shall receive					

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
the prior approval of and be supervised by the consulting arborist. ▪ Any demolition or excavation, such as grading, pad preparation, excavation, and trenching, within the dripline or other work that is expected to encounter tree roots should be approved and monitored by the consulting arborist. Any root pruning required for construction purposes shall receive prior approval of, and by supervised by, the consulting arborist. Roots shall be cut by manually digging a trench and cutting exposed roots with a sharp saw. ▪ Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Tree stumps shall be ground 12 inches below ground surface. ▪ All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Game Code Sections 3503 through 3513 to not disturb nesting birds. To the extent feasible, tree pruning, and removal shall be scheduled outside of the breeding season. Breeding bird surveys shall be conducted prior to tree work. Qualified biologists shall be involved in establishing work buffers for active nests. (see Mitigation Measure BIO-1) ▪ The vertical and horizontal locations of all the trees identified for preservation shall be established and plotted on all plans. These plans shall be forwards to the consulting arborist for review and comment. ▪ Foundations, footings, and pavements on expansive soils near trees shall be designed to withstand differential displacement to protect the soil surrounding the tree roots. ▪ Any liming within 50 feet of any tree shall be prohibited, as lime is toxic to tree roots. Any herbicides placed under paving materials shall be safe for use under trees and labeled for that use. ▪ Brush from pruning and trees removal operations shall be chipped and spread beneath the trees within the TPZ. Mulch shall					

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
be between 2 inches and 4 inches in depth and kept at a minimum of 3 feet from the base of the trees. - All recommendations for tree preservation made by the applicant's consulting arborist shall be followed.					
Mitigation Measure BIO-3: Implement Mitigation Measures BIO-1 and BIO-2.	Project Applicant	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	Qualifying Biologist/City of Cupertino Public Works Department	Preconstruction Survey/ Plan Review and Approval	Once for Survey; Ongoing if nesting birds identified and until they have left the nest/ Once during the preconstruction phase and ongoing during construction
CULTURAL RESOURCES					
Mitigation Measure CULT-1: If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing (including grading, demolition and/or construction) activities: - All work within 50 feet of the resources shall be halted, the City shall be notified, and a qualified archaeologist shall be consulted. The contractor shall cooperate in the recovery of the materials. Work may proceed on other parts of the project site while mitigation for tribal cultural resources, historical resources or unique archaeological resources is being carried out. - The qualified archaeologist shall prepare a report for the evaluation of the resource to the California Register of Historical Places and the City Building Department. The report shall also include appropriate recommendations regarding the significance of the find and appropriate mitigations as follows: - If the resource is a non-tribal resource, the archaeologist shall assess the significance of the find according to CEQA Guidelines Section 15064.5. - If the resource is a tribal resource – whether historic or prehistoric – the consulting archaeologist shall consult with the appropriate tribe(s) to evaluate the significance of the resource	Project Applicant/ Construction Contractor	During Construction	Consulting Archeologist and City of Cupertino Public Works Department	Plan Review and Approval	As needed if resources are unearthed

MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
and to recommend appropriate and feasible avoidance, testing, preservation or mitigation measures, in light of factors such as the significance of the find, proposed project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) may be implemented. ▪ All significant non-tribal cultural materials recovered shall be, as necessary, and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.					
Mitigation Measure CULT-3: Implement Mitigation Measure CULT-1.	Project Applicant/ Construction Contractor	During Construction	Consulting Archeologist and City of Cupertino Public Works Department	Plan Review and Approval	As needed if resources are unearthed
GEOLOGY AND SOILS					
Mitigation Measure GEO-1: The construction contractor shall incorporate the following in all grading, demolition, and construction plans: ▪ In the event that fossils or fossil-bearing deposits are discovered during grading, demolition, or building, excavations within 50 feet of the find shall be temporarily halted or diverted. ▪ The contractor shall notify the City of Cupertino Building Department and a City-approved qualified paleontologist to examine the discovery. ▪ The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. ▪ The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. ▪ If the project applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating	Project Applicant/ Construction Contractor	During Construction	Consulting Paleontologist and City of Cupertino Public Works Department	Plan Review and Approval	As needed if resources are unearthed

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
the effect of the proposed project based on the qualities that make the resource important. The excavation plan shall be submitted to the City for review and approval prior to implementation.					
Noise					
Mitigation Measure NOISE-1: Prior to Grading Permit issuance or the start of demolition activities, the project applicant shall demonstrate, to the satisfaction of the City of Cupertino Public Works Director and/or Community Development Director, that the proposed project complies with the following: ▪ Pursuant to Cupertino Municipal Code (CMC) Section 10.48.053 the construction activities shall be limited to daytime hours as defined in CMC Section 10.48.010 (i.e., daytime hours are from 7:00 a.m. to 8:00 p.m. on weekdays). ▪ At least 90 days prior to the start of construction activities, all offsite businesses and residents within 300 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the proposed project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification should include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. ▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, which includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City. ▪ During the entire active construction period, equipment and trucks used for project construction will utilize the best available	Project Applicant/ Construction Contractor	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	City of Cupertino Public Works Department	Plan Review and Approval/Site Inspections	Once for Plan Review/ During Scheduled Constructions Site Inspections

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. ▪ During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible. ▪ Haul routes shall be selected to avoid the greatest amount of sensitive use areas. ▪ Signs will be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment will be turned off if not in use for more than 5 minutes. ▪ During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only. The construction manager will use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.					
Utilities and Service Systems					
Mitigation Measure UTIL-1: No building permits shall be issued by the City for the proposed Westport Mixed-Use Project that would result in exceeding the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system. The project applicant shall demonstrate, to the satisfaction of the City of Cupertino and Cupertino Sanitary District (CSD), that the proposed project would not exceed the peak wet weather flow capacity of the Santa Clara sanitary sewer system by implementing one or more of the following methods: 1. Reduce inflow and infiltration in the CSD system to reduce peak wet weather flows; or	Project Applicant	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities	City of Cupertino Sanitary District	Plan Review and Approval	Prior to Issuance of Building Permits Authorizing Grading or Other Construction Activities

TABLE 6-1 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
2. Increase on-site water reuse, such as increased grey water use, or reduce water consumption of the fixtures used within the proposed project, or other methods that are measurable and reduce sewer generation rates to acceptable levels, to the satisfaction of the CSD. The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the CSD in the *Flow Modeling Analysis for the Homestead Flume Outfall to the City of Santa Clara*, prepared by Mark Thomas & Co. Inc., dated December 6, 2019, unless alternative (i.e., lower) generation rates achieved by the proposed project are substantiated by the project applicant based on evidence to the satisfaction of the CSD. To calculate the peak wet weather flow for a 10-year storm event, the average daily flow rate shall be multiplied by a factor of 2.95 as required by CSD pursuant to their December 2019 flow modeling analysis. If the prior agreement between CSD and the City of Santa Clara that currently limits the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system were to be updated to increase the permitted peak wet weather flow sufficiently to accommodate, this would also change the impacts of the project to less than significant. If this were to occur prior to the City's approval of building permits, then Mitigation Measure UTIL-1 would no longer be required to be implemented.					


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APPENDIX A:
COMMENT LETTERS

Comment Letter A1

From: Chop, Zachary@DOT <zachary.chop@dot.ca.gov>
Sent: Monday, December 2, 2019 1:56 PM
To: Gian Martire <GianM@cupertino.org>
Cc: Leong, mark@DOT <mark.Leong@dot.ca.gov>; Lithander, Beck@DOT <Beck.Lithander@dot.ca.gov>
Subject: Westport Mixed Use Project SCH # 2019070377 GTS # 04-SCL-2019-00698 Project ID 16395

Greetings,

The Department of Transportation (Caltrans) thanks the City of Cupertino for the opportunity to provide input in the environmental review process. We have reviewed the Westport Mixed Use Project DEIR and we would like to provide additional comments below: A1-1

In addition to the encroachment permit requirement, a Maintenance Agreement will also be required for landscaping installed in our ROW. Additionally, a tree within our ROW is marked for removal, this would require prior approval from the District Landscape Architect.

Thanks!

Zachary Chop
Associate Transportation Planner
Office of System & Regional Planning
Caltrans District 4
111 Grand Ave Oakland Ca 94612
(510) 622-1643

From: "Roman, Isabella@DTSC" <Isabella.Roman@dtsc.ca.gov>
Date: December 18, 2019 at 12:12:22 PM PST
To: Gian Martire <GianM@cupertino.org>
Subject: The Westport Mixed-Use Project DEIR Comment

Hello,

I represent a responsible agency reviewing the Draft EIR for the Westport Mixed-Use Project.

I see that two Phase 1 Environmental Site Assessments (ESAs) and a Limited Environmental Site Characterization (ESC) were prepared for the Site. Phase 1 ESAs don't typically present characterization data and the ESC compares soil data against hazardous waste criteria for the purposes of soil disposal. I would recommend collecting additional samples for the purposes of characterizing site media for protection of construction workers and future residents. I would recommend for sampling activities to include soil vapor to eliminate any concerns regarding vapor intrusion. A2-1

HAZ-2 refers to AQ-3 to discuss impacts to nearby schools. Only diesel particulate matter (DPM) is considered as an emission that would have the potential to impact nearby schools. Project construction would disrupt the soil and could potentially migrate to nearby schools. This should be acknowledged as well within the HAZ-2 discussion. I would recommend a dust control and air monitoring plans to be developed to protect construction workers and the nearby schools. A2-2

Please feel free to reach out if you have any questions or concerns.

Sincerely,

Isabella Roman
Environmental Scientist
Site Mitigation and Restoration Program
Department of Toxic Substances Control
700 Heinz Avenue Suite 200
Berkeley, CA 94710
(510)-540-3879

Comment Letter A3

DISTRICT MANAGER-ENGINEER
MARK THOMAS & COMPANY, INC.
BENJAMIN T. PORTER

DISTRICT COUNSEL
ATKINSON • FARASYN, LLP.
MARC HYNES

CUPERTINO SANITARY DISTRICT
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20863 STEVENS CREEK BOULEVARD, SUITE 100
CUPERTINO, CALIFORNIA 95014-2154
PHONE (408) 253-7071 • Fax (408) 253-5173

December 18, 2019

Gain Martire, Senior Planner
City of Cupertino
10300 Torre Avenue
Cupertino, CA 95014

Re: DRAFT ENVIRONMENTAL IMPACT REPORT FOR WESTPORT MIXED-USE PROJECT

Dear Mr. Martire:

The Cupertino Sanitary District has reviewed the Draft Environmental Impact Report (DEIR) for the Westport Mixed-Use Project. The following comments are provided for your review, incorporation of our comments, and to update the DEIR to produce the Final EIR. A3-1

Mitigation Measure UTIL-1:

A3-2 The statement that reads "The proposed project's estimated wastewater generation shall be calculated using the generation rates used by the San Jose-Santa Clara Water Pollution Control Plant Specific Use Code & Sewer Coefficient table in the May 2007, City of Santa Clara Sanitary Sewer Capacity" is not accurate for estimating peak wet weather flow. 2-19
These generation rates are used to calculate average flow to the treatment plant. Based on CSD model, peak wet weather flow for a 10-year storm event over average dry flow is 2.95 times the average.
It is also very unlikely that CSD will have an agreement to increase our 13.8 mgd permitted peak flow in the foreseeable future. A3-3

Mitigation Measure UTIL-2: A3-4

Same response comments as UTIL-1. 2-20

3.4.1.8 Utilities and Service Connections: Wastewater A3-5

Please add to last sentence in first paragraph - which discharges through City of Santa Clara joint usage interceptor. Please recalculate the new flow using the most recent data available: single family at 175 gpd; multi-family units at 133 gpd;retail at 0.073 gsf, and townhomes at 55 gallon per person. Please note that the rates are average. To get the peak flow in a pipe system, please multiply average by 2.95 factor. 3-22

DISTRICT MANAGER-ENGINEER
MARK THOMAS & COMPANY, INC.
BENJAMIN T. PORTER

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A3-6
4.9-3

4.9.2.1 and 4.9.2.2 Cupertino Sanitary District

In the last paragraph, which states 13.29 mgd. Please see most recent flow report. Please update this using the attached report. Also, for the existing condition, please update using the attached flow report. Also, indicate whether the reference is to average or peak.

A3-7
4.9-5 through -7

4.9.4 UTIL-1 Impact Discussion

Please update flows based on the attached report. Also, please separate impact discussion at the wastewater treatment facility and joint capacity issue through the City of Santa Clara. For the wastewater treatment facility, CuSD has 7.85 mgd capacity, which cannot be exceeded regardless of what the total treatment plant capacity is. CuSD does not anticipate an issue with the treatment plant capacity of 7.85 mgd through the City of Cupertino General Plan built-out, but expects capacity issues through the City of Santa Clara. Also, please verify 450 mgd capacity at the treatment plant is correct.

The statement that reduction of the peak wet weather flow from 14.25 mgd to 13.85 mgd by removal of illegal connections is incorrect. The District has not fully evaluated options to reduce I/I and does not expect it to be completed in the near future.

If you have any questions, please feel free to contact me.

Sincerely,
MARK THOMAS

Benjamin T. Porter

Benjamin T. Porter
District Manager-Engineer

Enc: CuSD Hydraulic Modeling report Updated 12/6/2019

Attachment A3-1

CUPERTINO SANITARY DISTRICT

FLOW MODELING ANALYSIS

HOMESTEAD FLUME OUTFALL TO CITY OF SANTA CLARA

CUPERTINO SANITARY DISTRICT

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CUPERTINO, CALIFORNIA 95014
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C 69302
EXP. 6/30/2020
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MANAGER-ENGINEER

Benjamin T. Porter

Benjamin T. Porter, P.E.
Mark Thomas & Co. Inc.

December 6, 2019

Attachment A3-1

Updated: December 6, 2019

HYDRAULIC MODELING BACKGROUND

Cupertino Sanitary District utilizes XPSWMM hydraulic modeling software to simulate flow conditions in its system. Cupertino Sanitary District is divided into 30 separate basins as shown on Figure 1 with the flume area divided into eight separate sub-basins.

Basins 17 and 23 discharge to the City of San Jose outfall located on Bollinger Road and do not discharge into the City of Santa Clara outfall. This area includes approximately 2,500 homes, 380 multi-family units, and 50 retail professional offices and commercial uses.

With the exception noted for Basins 17 and 23, all other areas within the District discharge into the City of Santa Clara outfall located on Homestead Road east of Tantau Avenue. At this outfall location, the District has a flow monitoring system to measure flows.

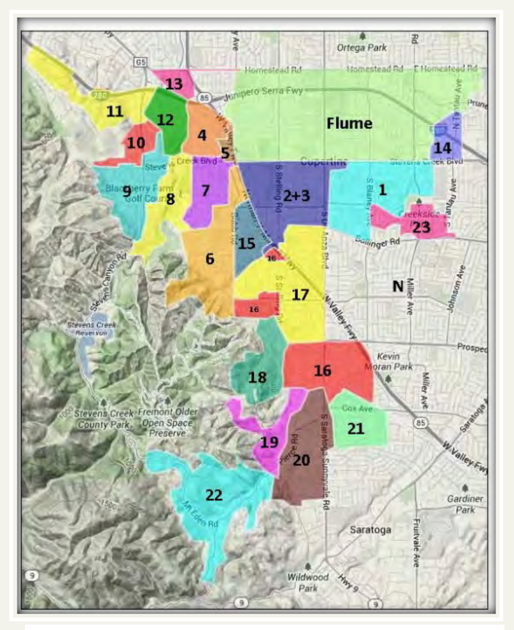


Figure 1. Cupertino Sanitary District Basins

Cupertino Sanitary District has 17 lift stations throughout the District with two largest lift stations located at Homestead Road in Basin 13 and Prospect Road in Basin 16.

FLOW MONITORING SYSTEM AT HOMESTEAD ROAD

The Homestead Flow Monitoring Station is equipped with an 18-inch Parshall Flume as the primary metering device with a flow sensor constructed in 1966. The installation consists of 25-feet of 3’6” W x 2’6” H box culvert on each side of the Parshall Flume. The maximum height of water surface that can be measured in the flume is 2.5-feet which is the maximum gravity flow height in an upstream box culvert, with a corresponding flow rate of 15.87 MGD.

Initially, the flume utilized Q-Trek (Geotivity) and Hydro-Ranger (Miltronic) for flow sensor units. The District determined that the Miltronic unit was outputting higher flow rates than Geotivity but determined the Miltronic unit to be more reliable. This unit was utilized until 2007. In 2007, the flow sensor was replaced with a more advanced and enhanced version (ISCO 2110 – Teledyne) which was calibrated to field conditions. In 2013, the District retained V&A Consultants to recalibrate the sensor and to produce monthly flow reports.

Homestead Flow Monitoring Station recorded flows historically, as provided in Table 1.

Attachment A3-1

Table 1. Historical Flow Measurements at Homestead Flow Monitoring Station

Date	Rainfall (inches)	Average Daily Flow (MGD)	Peak Hourly Flow (MGD)	Average Daily Dry Flow (Sept Month) MGD	Comments
2/7/1998	2.5	6.12	12.20	4.35	Week total rainfall 9.8”
11/8/1999	1.0	4.49	7.50	4.29	
1/24/2000	2.3	6.30	8.30	4.41	2-Day total rainfall 4.3”
3/4/2001	1.6	4.84	8.00	4.52	
11/8/2002	1.5	5.23	10.49	4.70	2-Day total rainfall 2.81”
2/26/2003	UNK	5.96	8.12	4.96	
3/24/2004	UNK	4.11	7.55	4.16	
12/31/2005	UNK	5.40	9.04	4.14	
1/2/2006	UNK	5.67	10.42	4.18	
1/27/2007	0.57	5.08	8.25	4.22	
2/24/2008	0.81	5.44	9.03	4.11	Day prior 0.94”
2/16/2009	0.75	5.65	9.39	4.12	Day prior 2.25”
1/20/2010	1.80	6.14	10.5	4.10	Prior 2 days 0.96” and 1.47”
1/19/2012	0.80	5.71	9.76	4.11	Mid-year – HP closed
12/8/2013	0.44	3.94	6.42	3.74	
12/11/2014	3.42	5.86	9.13	3.69	3 days prior had 3.32” rainfall
2/8/2015	1.96	4.49	7.91	3.44	
3/5/2016	1.70	4.52	7.01	3.46	Month of Feb 2016 very little rain
3/13/2016	0.92	4.90	7.92	3.90	Raining on and off 3/3 to 3/13 – 0.73”
1/8/2017	1.71	5.48	9.18	3.72	Week total rainfall 3.82”
3./8/2018	0.35	4.26	6.66	4.26	Average is for month of March
6/21/2018	0	3.86	6.09	3.79	Average is for month of June
9/5/2018	0	4.02	6.36	3.86	With Apple Campus 2 fully in operation
10/24/2018	0	3.92	6.21	3.87	Most Recent Data as of 10/2018 with Apple Campus 2 fully in operation

DEVELOPMENT OF COMPUTER MODEL

Land use data for the existing condition were input from the Cities of Cupertino and Saratoga General Plans and approved development/land use projects. This input was confirmed with Google Earth overlay to determine accuracy of the existing uses. Pipe networks were input from GIS system and accuracy was confirmed with as-built records and field verification.

Initial dry flow data utilized for the generation of model flow outputs were either calculated, measured dry flows from 30 basins, or estimated flow from tax roll based on water consumption. Measured dry flow data for 30 basins were obtained from the District I/I Study Report prepared by V&A Engineering in 2016.

With this initial data, XPSWMM generated model dry flow rates. These flows were then compared to actual measured flows to validate the model for dry flow conditions. The XPSWMM model was then updated to incorporate flows measured at each basin including refinement of the pipe network system with further field investigation to correct missing or inconsistent data in the model. Approximately 150 manholes were field-verified to determine actual flow splits because the model defaults to a 50-50 split. As-built information was utilized to accurately depict the as-built condition for each individual pipe network and manhole profile.

With the validation of the dry flow condition, the next step was to simulate wet weather flows. The measured wet weather flows and the gauged rainfall from those events in 2016 were input in the model and used to calibrate the wet weather response of the model in XPSWMM. The dry average, dry peak, wet average, and wet peak flow were calculated and calibrated at each of the 30 basins in the model. Calibration consisted of adjusting the rainfall-derived infiltration and inflow (RDII) RTK values. The RTK values correspond to three unit hydrographs that estimate the fast, medium, and slow RDII responses in the system. These RTK values were calculated in the EPA Sanitary Sewer Overflow Analysis and Planning (SSOAP) tool using the metered flow and rain gauge information from the I/I Study.

These model results were compared with the measured flows. The validated model outputs accurately depicted the existing condition. A comparison of modeled and measured flows is provided in Table 2.

Table 2. Comparison of Modeled and Measured Flows

Existing Condition	Model Flow (MGD)	Measured Flow (MGD)
Dry Average Daily Flow	3.74	3.79 (6/21/2018) 3.86 (9/25/2018) 3.87 (10/24/2018)
Dry Peak Flow	6.19	6.09 (6/221/18) 6.26 (9/25/2018) 6.21 (10/24/2018)
Average Wet Weather Flow to match metered flow (2016 Storm Event from V&A Study)	4.47	4.49
Peak Wet Weather Flow to match metered flow (2016 Storm Event from V&A Study)	7.78	7.92

December 11, 2014 storm was the largest storm event recorded in the last 60 years in the Bay Area. This storm produced 3.49 inches of rain over a 24-hour period. The storm started at about 11 p.m. the night of December 10. The flow metering station recorded the maximum flow of 9.13 MGD at 10 p.m. During this storm event, Homestead Pump Station reached its maximum output and could not handle the entire flow coming into the pump station. The District set up an emergency pumper VAC truck to avoid sanitary sewer overflows for about six hours. Based on our record, this storm event represents approximately a 20-year storm event for the Bay Area Region. For example, Elm Court in the City of Cupertino had water ponding up to 6 feet in the cul-de-sac street area. Likewise, Cupertino Road near Foothill Boulevard was also ponding water up to 2 feet. During this period, a sanitary sewer manhole cover was removed to allow storm water to enter so that the adjacent residential homes would not be flooded. There were recordings higher than 9.13 MGD in the past. The daily rainfall was less than 3.49 inches, but in the days prior to the storm event, there were a few smaller storm events, saturating the soil.

The I/I Report concluded that the storm of March 5, 2016, with a total of 1.71 inches of rain in a 24-hour period, closely represents a two-year storm event and resulted in a recorded peak discharge of 7.01

MGD. On March 13, 2016, one week later, with another 0.92 inches of rain, a peak discharge of 7.92 MGD was recorded. These events were used to further refine the District sanitary sewer model.

Rainfall

The 10-year storms used to model peak wet weather flows in the model were generated using a rainfall pattern used in the Santa Clara County for 2, 10, and 100-year return periods. These design rainfalls are based on the three-day event in December 1955 that is considered to be the largest storm on record for Northern California. The rainfall pattern provides hourly rainfall distribution percentages that can be multiplied by the theoretical 24-hour rainfall depth to obtain the hyetograph for the region. Theoretical 24-Hour 10-Year rainfall depths were obtained for each basin using NOAA rainfall frequency estimates. These rainfall depths were taken at an approximate centroid location for each basin. These rainfall depths are shown in the Appendix. Rainfall depths were gathered at the centroid of each basin. For the District modeling, the rain event was shifted by two hours so that the peak rainfall would occur at the same time as the dry weather flow peak. A representative rainfall hydrograph used to model a 10-year storm is provided in Figure 2. Table 3 below shows the rainfall distribution percentages used to generate all the hyetographs.

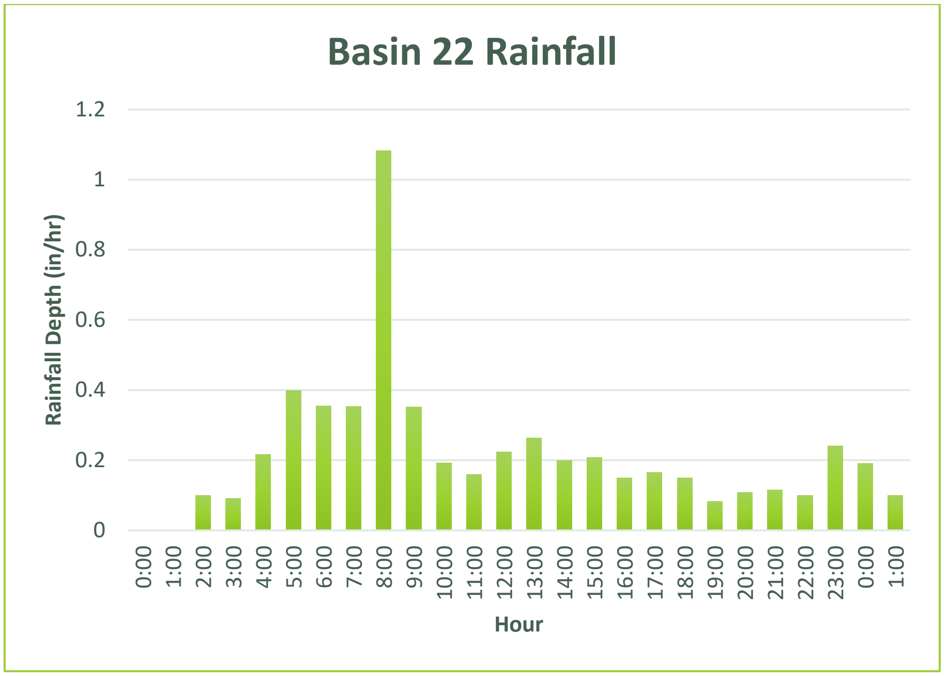


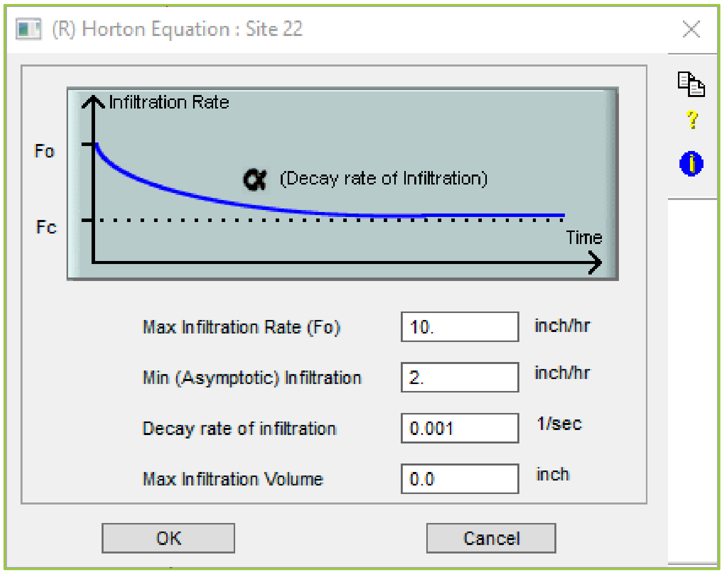
Figure 2. 10-Year Storm Hydrographs for Basin 22

Table 3. Fractions of Total Rainfall for 24 Hour Storm

Hour	Fraction of Total Rainfall
0:00	0.00
1:00	0.00
2:00	0.0178
3:00	0.0163
4:00	0.0387
5:00	0.0712
6:00	0.0634
7:00	0.0632
8:00	0.1932
9:00	0.0627
10:00	0.0343
11:00	0.0286
12:00	0.0400
13:00	0.0472
14:00	0.0357
15:00	0.0372
16:00	0.0267
17:00	0.0296
18:00	0.0267
19:00	0.0148
20:00	0.0193
21:00	0.0207
22:00	0.0178
23:00	0.0430
0:00	0.0341
1:00	0.0178

Existing Groundwater Soil Conditions & Infiltration

The Horton Infiltration method was used to compute the amount of rainfall becoming groundwater in pervious areas. Dry soils contribute a larger maximum initial infiltration than moist soils. For the District’s model runs, the pervious areas were treated as either dry sandy soils with dense vegetation for the hillside areas, and dry clayey soils with little vegetation for the rest of the District in its urban service area. Below, in Figure 3, is an example of the Horton Equation parameters for Basin 22.



Max Infiltration Rate (Fo) 10. inch/hr

Min (Asymptotic) Infiltration 2. inch/hr

Decay rate of infiltration 0.001 1/sec

Max Infiltration Volume 0.0 inch

Figure 3. Horton Equation Parameters for Basin 22

Rainfall-Dependent Inflow & Infiltration

Rainfall-dependent inflow and infiltration (RDII) is the portion of rainfall that enters a sanitary sewer system after a rain event. Inflow is the direct flow of surface runoff into the sewer system and infiltration is the groundwater that enters the system through cracks and other defects. Inflow is seen as an almost immediate response and infiltration may take several hours, and sometimes even days, to be seen within the system.

RDII was calculated for this model using the RTK unit hydrograph method. This method fits three triangular unit hydrographs of different response times (fast medium, and slow) and creates one total hydrograph due to the rainfall depth that entered the system. The fast hydrograph represents the inflow response, the medium hydrograph is a combination of inflow and infiltration, and the slow hydrograph is solely infiltration. The RTK method is named after the three parameters R, T, & K. R is the fraction of rainfall that enters the sewer system, T is the time for this rainfall to peak, and K is the ratio of the time of recession for parameter T. Figure 5 below shows a hydrograph consisting of three sets of RTK values.

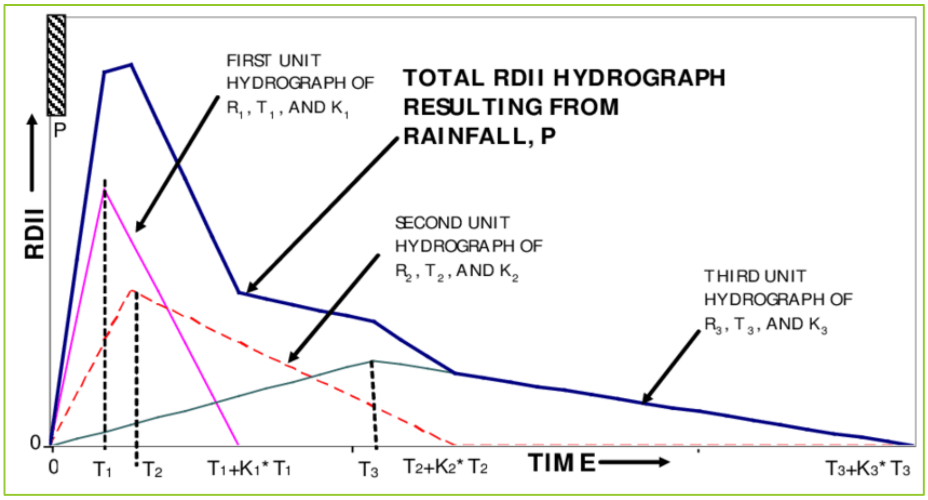
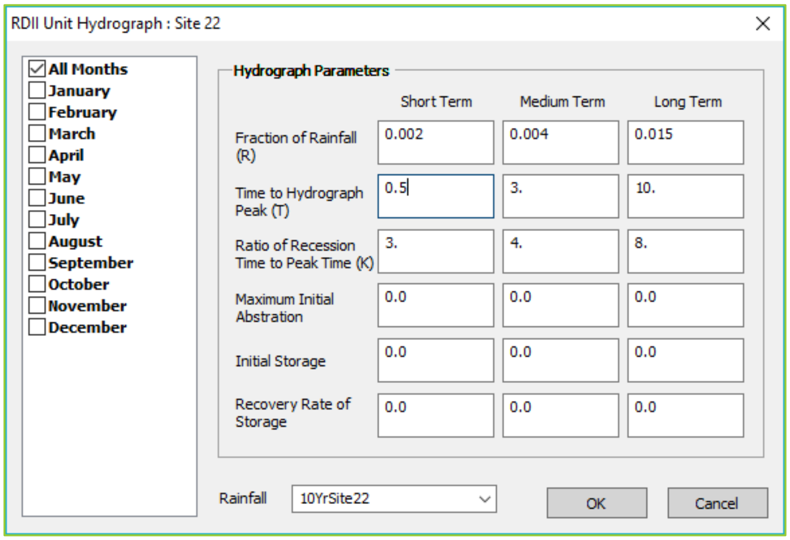


Figure 4. RTK Hydrographs

The RTK values were calibrated for the District's model from the metered rainfall and flow from the District's I/I Study Report. For the District's model, the peak R values were used to model a worst-case scenario within the system. Figure 5 below shows RTK values being input into EPA SWMM for a specific rain event, as well as the RTK values input for an entire basin in XPSWMM.


RDII Unit Hydrograph : Site 22

☑ All Months
☐ January
☐ February
☐ March
☐ April
☐ May
☐ June
☐ July
☐ August
☐ September
☐ October
☐ November
☐ December

Hydrograph Parameters

	Short Term	Medium Term	Long Term
Fraction of Rainfall (R)	0.002	0.004	0.015
Time to Hydrograph Peak (T)	0.5	3.	10.
Ratio of Recession Time to Peak Time (K)	3.	4.	8.
Maximum Initial Abstraction	0.0	0.0	0.0
Initial Storage	0.0	0.0	0.0
Recovery Rate of Storage	0.0	0.0	0.0

Rainfall: 10YrSite22

Figure 5. RTK Values for Basin 22

The red line in Figure 6 below represents the wet weather flow only from inflow and infiltration. The yellow line is the total RDII based on the fast, medium, and slow RTK hydrographs. The teal line is the fast hydrograph, the pink line is the medium response hydrograph, and the purple line is the slow hydrograph due to infiltration.

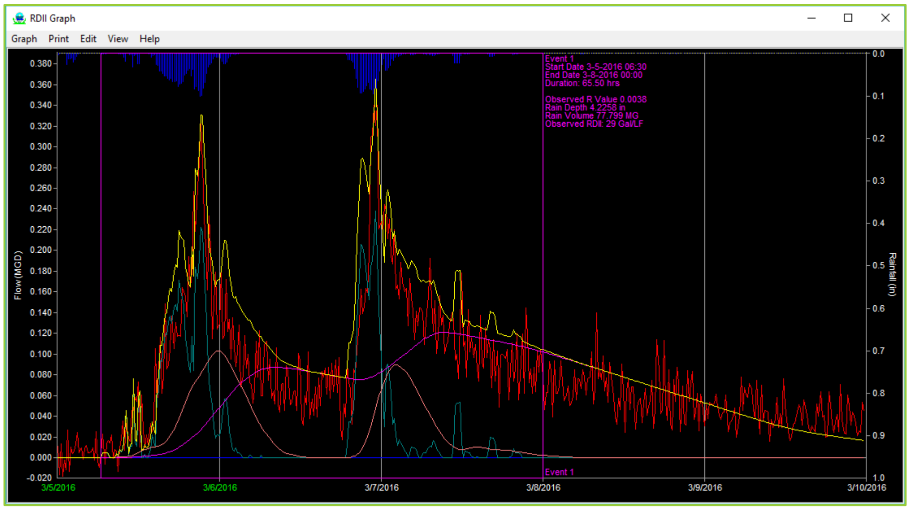
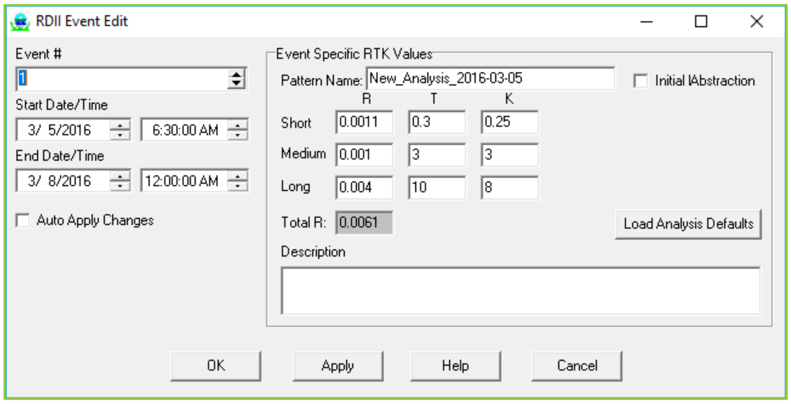


Figure 6. RTK Values for Specific Storm

These RTK values were calculated using a software application named Sanitary Sewer Overflow Analysis and Planning Toolbox (SSOAP). The data input in Figure 7 below shows the window in EPA SSOAP where the user can change the fast, medium, and slow RTK values. The software has an “Auto Apply Changes” option where the hydrographs are updated automatically as the RTK values are changed. This function is helpful when calibrating these values.



Event #: 1

Start Date/Time: 3/ 5/2016 6:30:00 AM

End Date/Time: 3/ 8/2016 12:00:00 AM

☐ Auto Apply Changes

Pattern Name: New_Analysis_2016-03-05

☐ Initial Abstraction

	R	T	K
Short	0.0011	0.3	0.25
Medium	0.001	3	3
Long	0.004	10	8

Total R: 0.0061

Description:

Figure 7. EPA SSOAP

FUTURE BUILD-OUT WITHIN CUPERTINO SANITARY DISTRICT

Based on comments from the City of Santa Clara’s consultant related to flow rates used for the February 20, 2019 Report based on the California Green Building Codes being low, the District has reevaluated these flow criteria and has updated the flow rates as follows

Attachment A3-1

FOR RESIDENTIAL DEVELOPMENTS

The City of San Jose completed a Flow Study Report, dated February 2, 2015, for the residential properties tributary to the treatment plant. In summary, the following criteria were utilized to generate flows:

1) Residential Household Sizes: For single family 2.94 ppu and multi-family 2.47 ppu based on 2012 ACS data.

2) Three-year water consumption data (2010-2012) was utilized, with the assumption that 100% of water consumption for the months of January, February, and March would be the wastewater flow (except flows were capped at 400 gpd/household and 300 gpd/household for single family and multi-family, respectively. This resulted in 66 and 60 gpcd for single family and multi-family, respectively).

3) The above two factors were multiplied to yield 194 gpd/household and 148 gpd/household, respectively.

4) For estimating residential flows for future developments, the District has reduced 194 and 148, respectively by 10% to account for improved low-flow fixtures and water conservation. The District flow rate for single family is 175 gpd and 133 gpd for multi-family.

FOR NON-RESIDENTIAL DEVELOPMENTS

1) The District estimated flow rates in 2018 for non-residential uses based on water consumption. The District utilized the entire one-year water consumption for all non-residential uses. Based on the level of outdoor landscaping, the District uses a range of 60% to 95% of the annual water consumption to estimate wastewater flow. If the developments have a separate water meter for outdoor and indoor uses, the District uses 100% of the flow from the indoor water meter as the wastewater flow.

2) Calculated Estimated Flows:

Uses	Number of units	HCF	SF or Units	gallon/SF or gallon/unit
Retail/Commercial	1137	317,446	8,916,180	0.0729625
Restaurant	244	255,203	869,000	0.6018312
Convalescent Home	3	12,049	391	63.2
Hotel	5	31,848	772	84.6

Attachment A3-1

3) Future flow rates are calculated using above criteria and are summarized as follows:

Approved Project - Forum Flowrates (gpd)		
Use	From Calgreen	New CuSD Rates
Restaurant	0	0
Medical/Convalescent	1,059	11,740
Residential	5,423	4,800
Total	6,482	16,540

Approved Project - Hamptons Flowrates (gpd)		
Use	From Calgreen	New CuSD Rates
Restaurant	0	0
Retail/Office	0	0
Residential	43,728	79,800
Total	43,728	79,800

Approved Project - Marina Flowrates (gpd)		
Use	From Calgreen	New CuSD Rates
Restaurant	23,842	14,008
Hotel	8,966	10,370
Residential	8,897	27,265
Total	41,705	51,643

Approved Project - Hyatt Flowrates (gpd)		
Use	From Calgreen	New CuSD Rates
Restaurant	9,888	5,895
Hotel	4,375	12,580
Total	14,263	18,475

Proposed SB 35 Project - Vallco Flowrates (gpd)		
Use	From Calgreen	New CuSD Rates
Restaurant	87,360	52,080
Retail/Office	102,629	157,230
Residential	246,958	319,466
Total	436,946	528,776

Attachment A3-1

Cupertino Future 2040 Build-Out General Plan beyond the approved projects and Vallco - Flowrates (gpd)		
Use	From Calgreen	New CuSD Rates
Restaurant	413,764	246,667
Retail/Office	6,562	31,290
Residential	135,750	240,730
Hotel	4,880	10,370
Total	560,956	529,057

The above dry flows were input into the XPSWMM computer model to generate new flow rates. The New CuSD Rates were input into the model as an average dry flow which is then multiplied by hourly diurnal multipliers based on the use of the facility. An example of a commercial diurnal flow multipliers is shown in the Appendix.

These flows enter the system at an estimated location where these developments will connect and are summarized in Table 4. Table 4 also retained the original flow rates based on the California Green Building Code, which were included in the original report, dated February 20, 2019, for comparison of data between the California Building Codes versus the District’s Flow Rates as presented in this report.

Attachment A3-1

Table 4. Model Output Comparison with Existing and Future Conditions

Model Scenarios	Existing Condition Flow (MGD)	Existing Plus Approved Projects (MGD)	Existing Plus Vallco and Approved Projects (MGD)	Existing Plus Vallco, Approved Projects and Full 2040 GP
CAL GREEN CRITERIA: Dry Average Daily Flow – Calibrated flow to match metered flows of 2018	3.90	3.95	4.34	4.68
CUSD NEW FLOW RATE CRITERIA: Dry Average Daily Flow	3.74	3.91	4.44	4.95
CAL GREEN: Dry Peak Flow – Calibrated flow to match metered flows of 2018	6.60	6.69	7.12	7.68
CUSD NEW FLOW RATE CRITERIA: Dry Peak Flow	6.19	6.46	7.32	8.11
CAL GREEN: Average Wet Weather Flow to match metered flow (2-year Storm Event)	5.71	5.77	6.07	6.41
CUSD NEW FLOW RATE CRITERIA: Average Wet Flow	5.71	5.80	6.15	6.47
CAL GREEN: Peak Wet Weather Flow to match metered flow (2-year Storm Event of 1/8/2017- 1.7 inches, 24-hour period, but soil saturation and total of 3.82” in one week prior to storm event). Other 2-year storm event occurred on 3/5/2016.	9.41	9.46	10.00	10.43
CUSD NEW FLOW RATE CRITERIA: Peak Wet Weather to match 2-year storm	9.41	9.51	10.13	10.62
CAL GREEEN: Average Wet Weather Flow for a 10-year Storm Event	8.43	8.50	8.78	9.03
CUSD NEW FLOW RATE CRITERIA: Average wet 10-year storm event	8.71	8.89	9.41	9.84
CAL GREEN: Peak Wet Weather Flow for a 10-year Storm Event	13.29	13.34	13.82	14.02
CUSD NEW FLOW RATE CRITERIA: Peak Wet 10-year Storm	13.14	13.32	14.08	14.61

APPENDIX 1

Flow Hydrographs for the modeled conditions

Attachment A3-1

Hydrographs

XPSWMM values are in CFS (cubic feet per second)

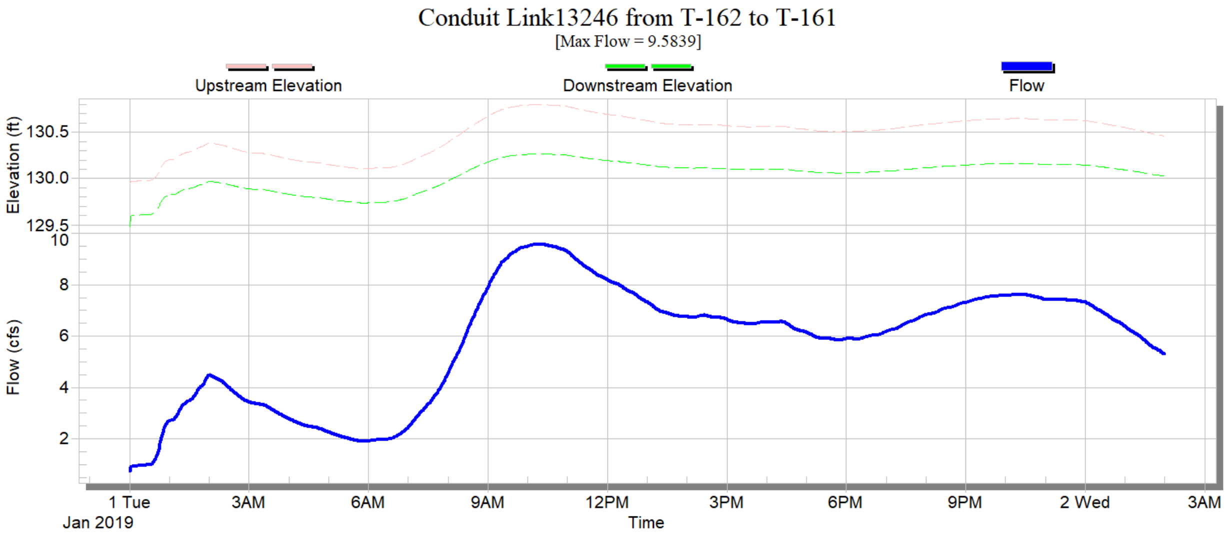


Figure 8. Unit hydrograph for existing condition - Dry

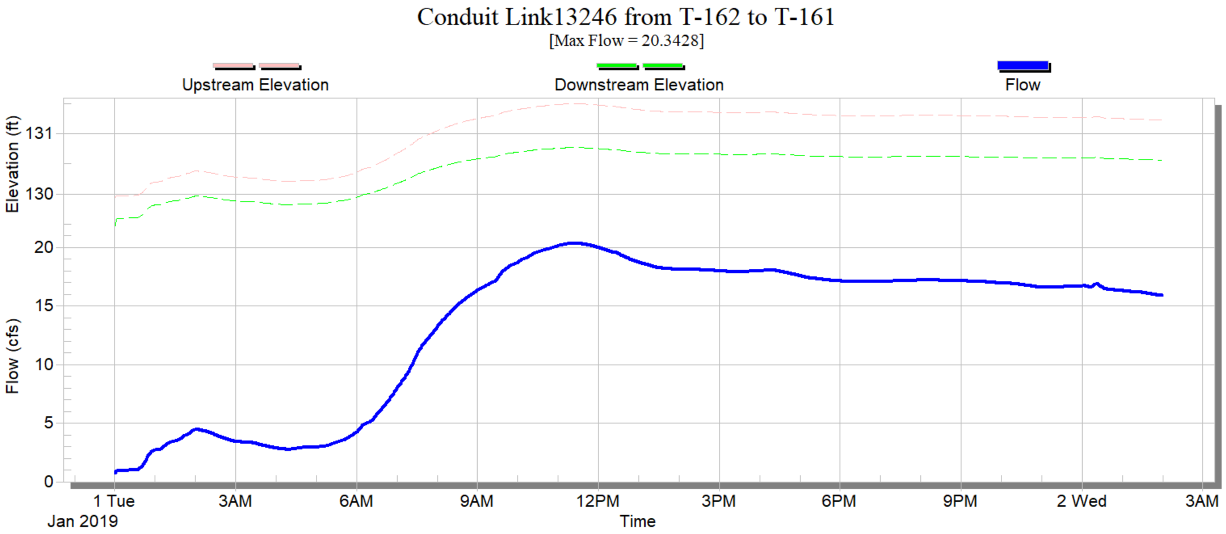


Figure 9. Unit Hydrograph for existing condition – 10 Year Storm

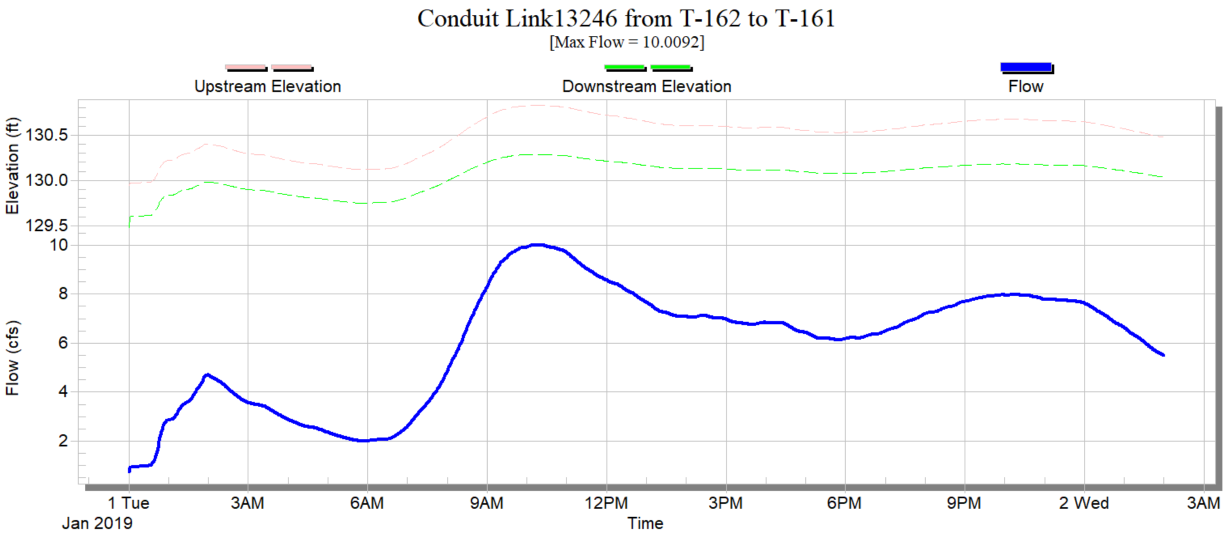


Figure 10. Unit hydrograph for Approved Projects – Dry

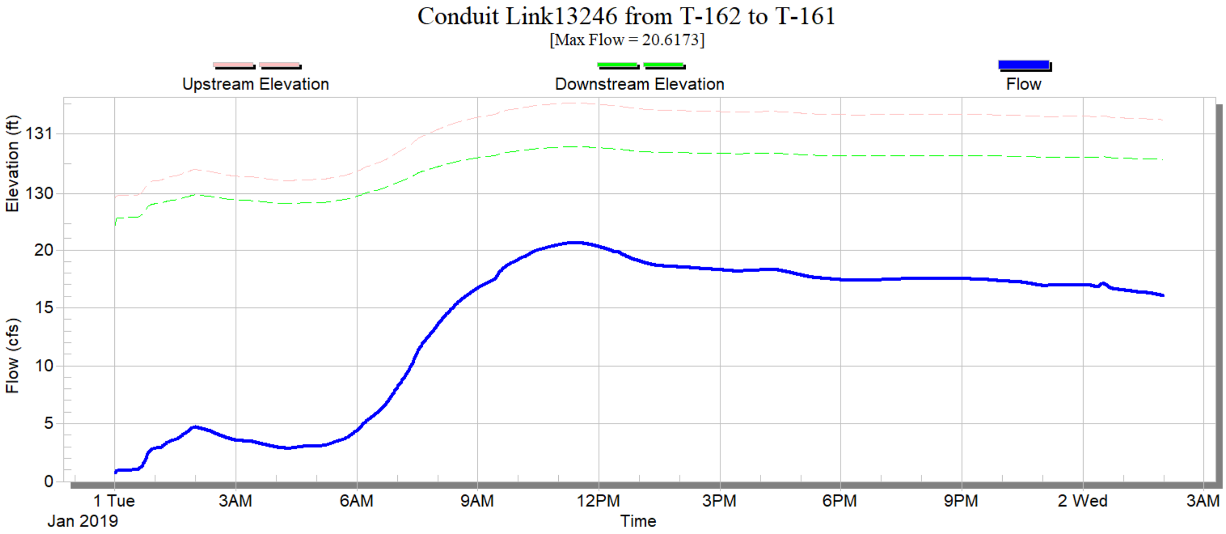


Figure 11. Unit hydrograph for Approved Projects – 10 Year Storm

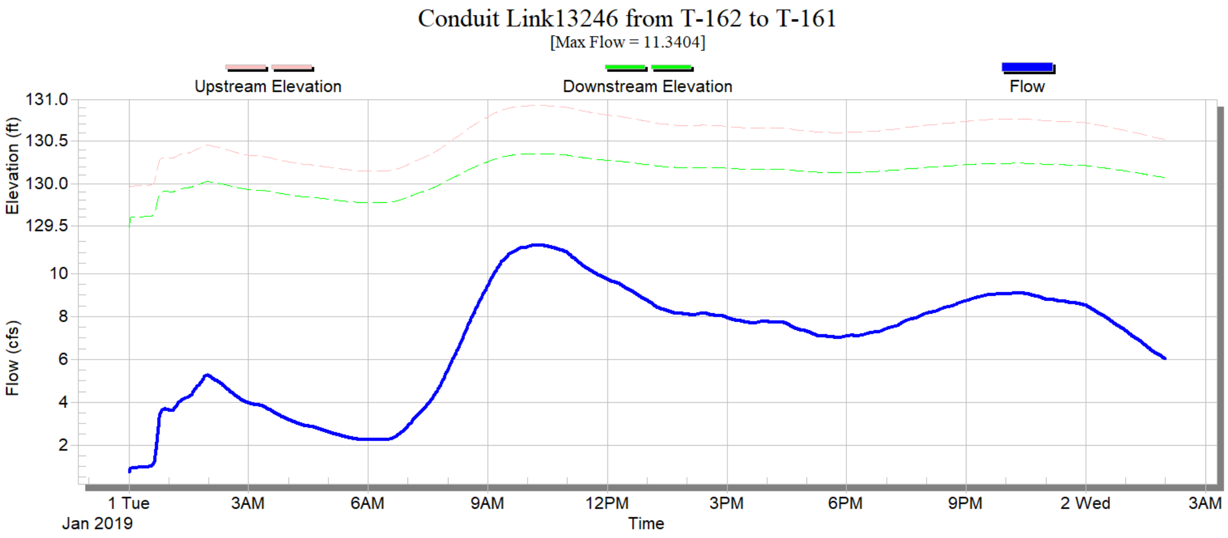


Figure 12. Unit Hydrograph for Approved Projects plus Vallco – Dry

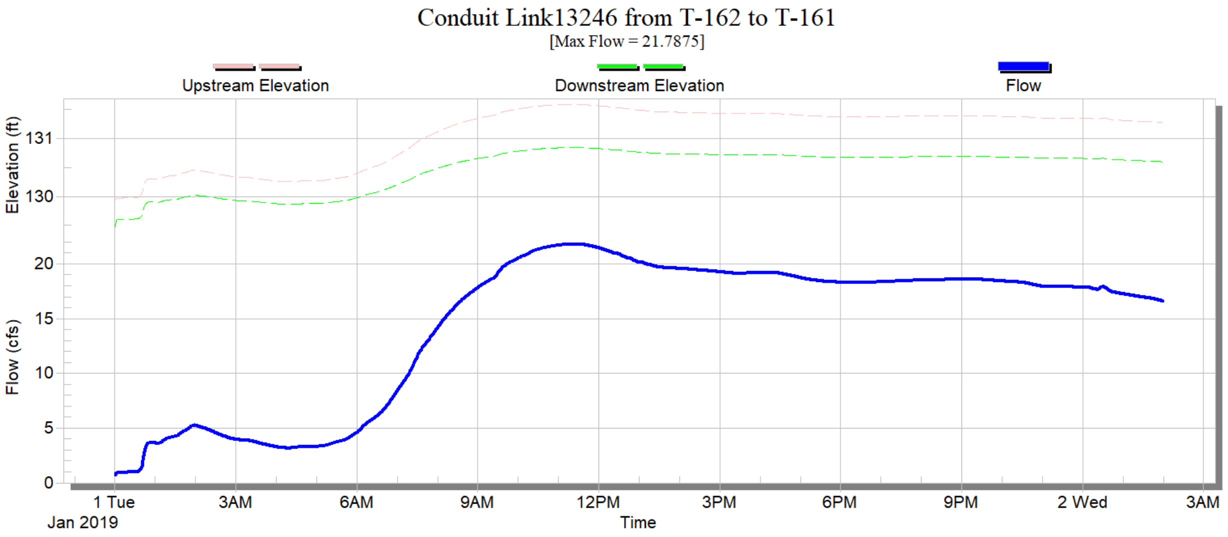


Figure 13. Unit hydrograph for Approved Projects Plus Vallco – 10 Year Storm

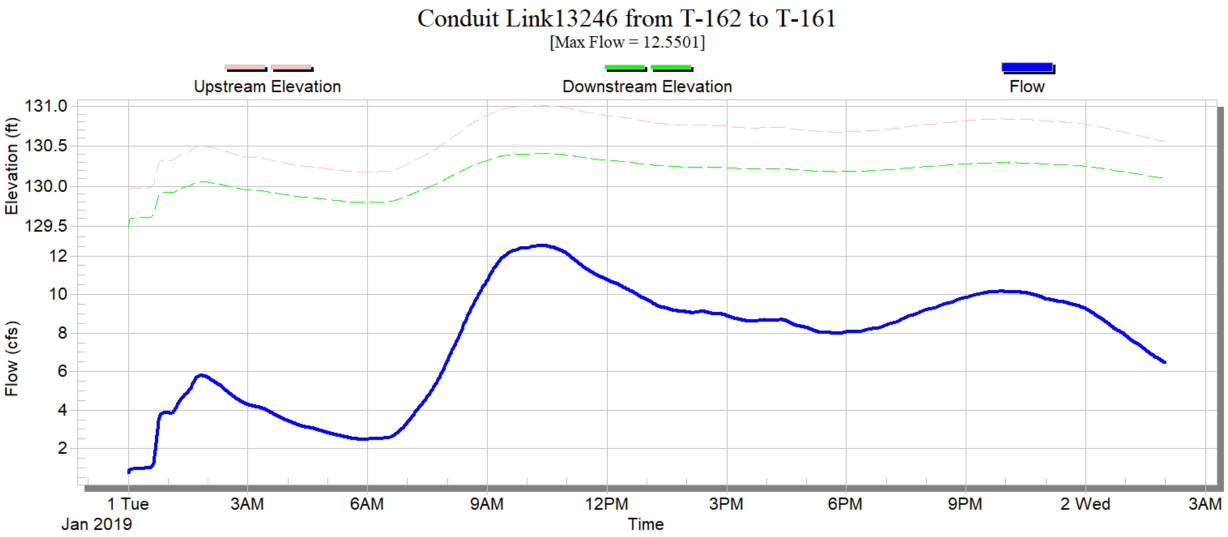


Figure 14. Unit Hydrograph for 2040 Build-out – Dry

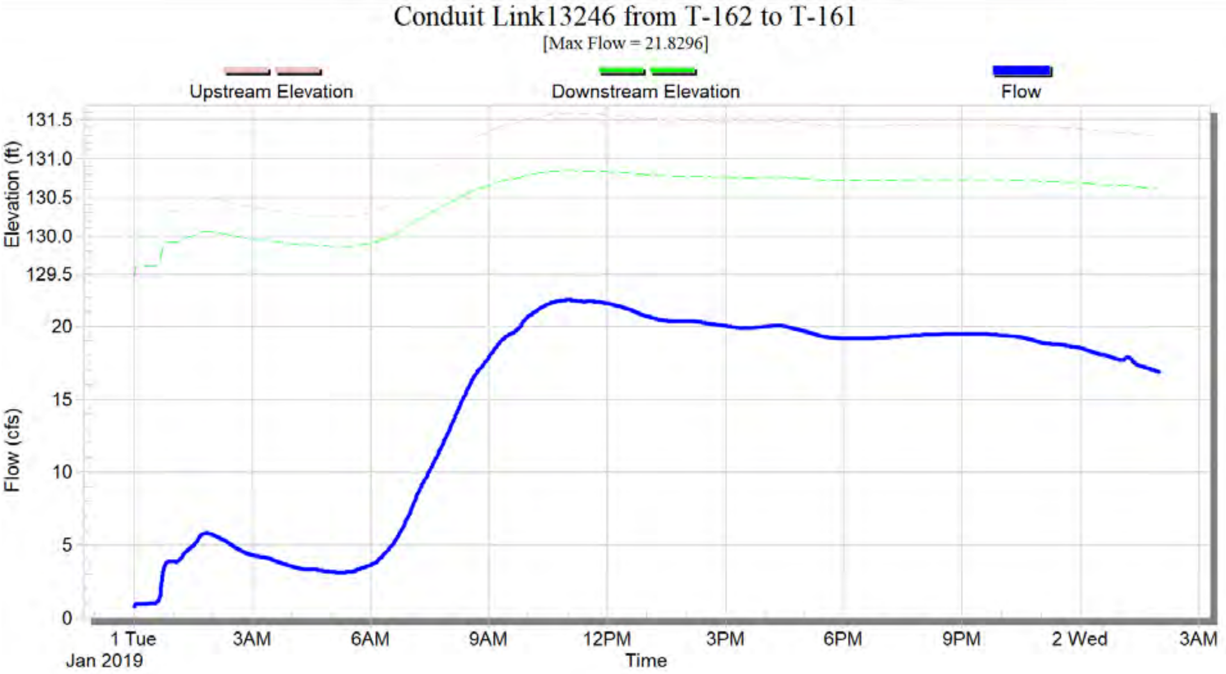


Figure 15. Unit hydrograph with 2040 Build-Out – 10 Year Storm

APPENDIX 2

Rainfall data/information

Rainfall Information

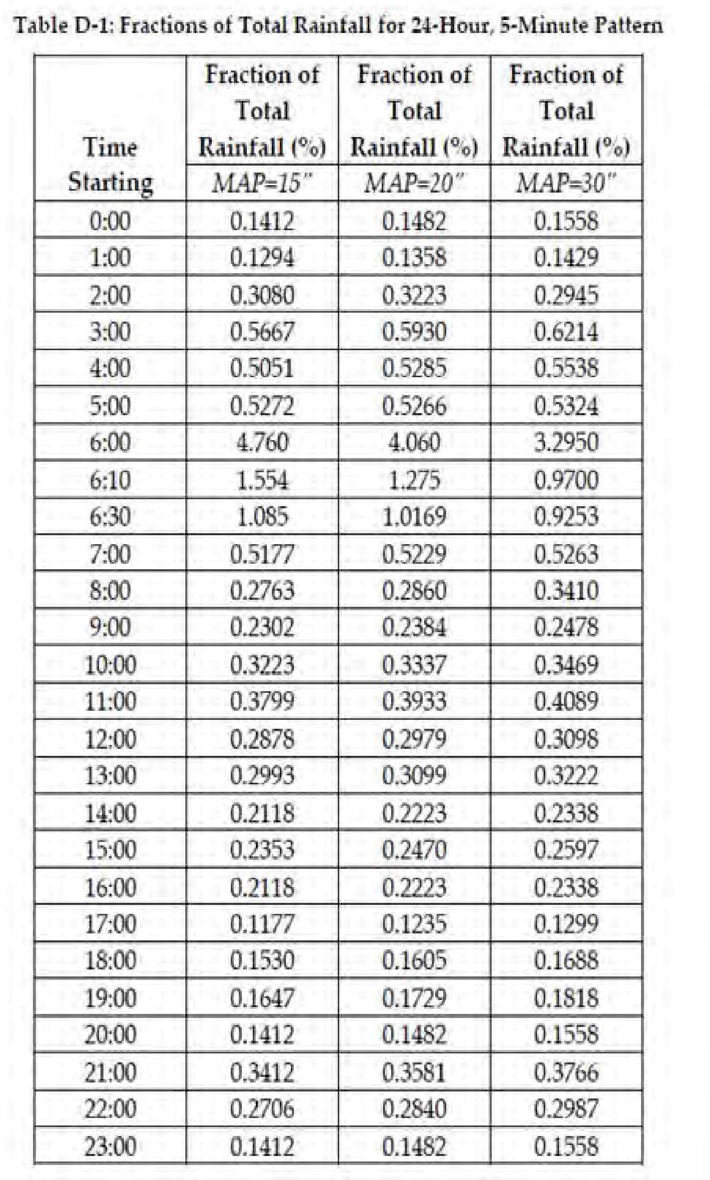


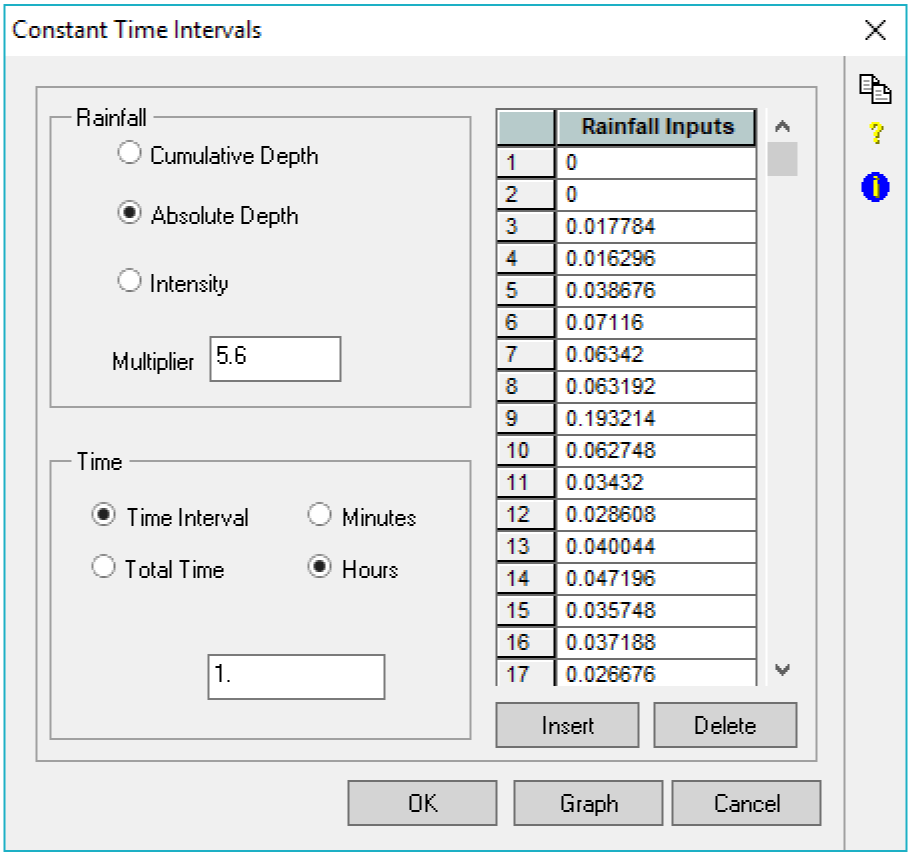
Table D-1: Fractions of Total Rainfall for 24-Hour, 5-Minute Pattern

Time Starting	Fraction of Total Rainfall (%)	Fraction of Total Rainfall (%)	Fraction of Total Rainfall (%)
	MAP=15″	*MAP=20″*	*MAP=30″*
0:00	0.1412	0.1482	0.1558
1:00	0.1294	0.1358	0.1429
2:00	0.3080	0.3223	0.2945
3:00	0.5667	0.5930	0.6214
4:00	0.5051	0.5285	0.5538
5:00	0.5272	0.5266	0.5324
6:00	4.760	4.060	3.2950
6:10	1.554	1.275	0.9700
6:30	1.085	1.0169	0.9253
7:00	0.5177	0.5229	0.5263
8:00	0.2763	0.2860	0.3410
9:00	0.2302	0.2384	0.2478
10:00	0.3223	0.3337	0.3469
11:00	0.3799	0.3933	0.4089
12:00	0.2878	0.2979	0.3098
13:00	0.2993	0.3099	0.3222
14:00	0.2118	0.2223	0.2338
15:00	0.2353	0.2470	0.2597
16:00	0.2118	0.2223	0.2338
17:00	0.1177	0.1235	0.1299
18:00	0.1530	0.1605	0.1688
19:00	0.1647	0.1729	0.1818
20:00	0.1412	0.1482	0.1558
21:00	0.3412	0.3581	0.3766
22:00	0.2706	0.2840	0.2987
23:00	0.1412	0.1482	0.1558

Figure 16. Rainfall from Santa Clara County 2007 Drainage Manual

Table 5. Rainfall per hour based on Santa Clara County 2007 Drainage Manual. These values are then multiplied by event rainfall depths to obtain hyetographs

Time	Fraction of Total Rainfall (%) MAP=20" (5 minute intervals)	Fraction of Total Rainfall (%) 1 Hour Interval	Fraction of Total Rainfall
0:00	0.1482	1.7784	0.0178
1:00	0.1358	1.6296	0.0163
2:00	0.3223	3.8676	0.0387
3:00	0.593	7.1160	0.0712
4:00	0.5285	6.3420	0.0634
5:00	0.5266	6.3192	0.0632
6:00	4.06	8.1200	0.0812
6:10	1.275	5.1000	0.0510
6:30	1.0169	6.1014	0.0610
7:00	0.5229	6.2748	0.0627
8:00	0.286	3.4320	0.0343
9:00	0.2384	2.8608	0.0286
10:00	0.3337	4.0044	0.0400
11:00	0.3933	4.7196	0.0472
12:00	0.2979	3.5748	0.0357
13:00	0.3099	3.7188	0.0372
14:00	0.2223	2.6676	0.0267
15:00	0.247	2.9640	0.0296
16:00	0.2223	2.6676	0.0267
17:00	0.1235	1.4820	0.0148
18:00	0.1605	1.9260	0.0193
19:00	0.1729	2.0748	0.0207
20:00	0.1482	1.7784	0.0178
21:00	0.3581	4.2972	0.0430
22:00	0.284	3.4080	0.0341
23:00	0.1482	1.7784	0.0178



Constant Time Intervals

Rainfall
○ Cumulative Depth
● Absolute Depth
○ Intensity

Multiplier 5.6

Time
● Time Interval
○ Total Time
○ Minutes
● Hours

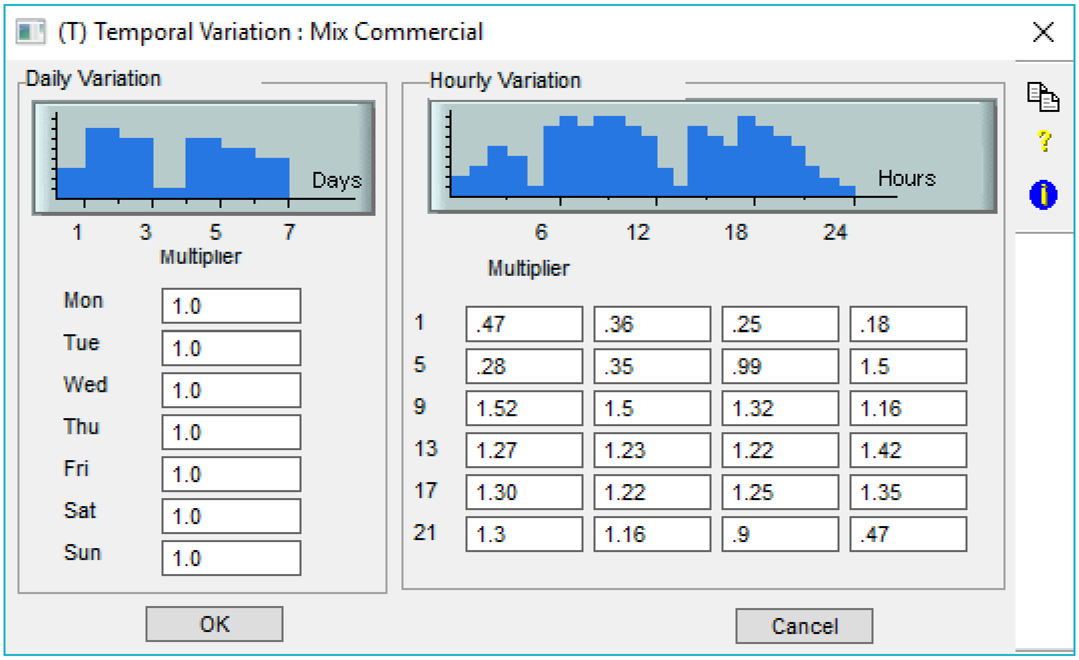
1.

	Rainfall Inputs
1	0
2	0
3	0.017784
4	0.016296
5	0.038676
6	0.07116
7	0.06342
8	0.063192
9	0.193214
10	0.062748
11	0.03432
12	0.028608
13	0.040044
14	0.047196
15	0.035748
16	0.037188
17	0.026676

Figure 17. Rainfall per hour based on Santa Clara County 2007 Drainage Manual. These values are then multiplied by event rainfall depths to obtain hyetographs

Attachment A3-1

Diurnal Flow Pattern Example



Mon	1.0
Tue	1.0
Wed	1.0
Thu	1.0
Fri	1.0
Sat	1.0
Sun	1.0

1	.47	.36	.25	.18
5	.28	.35	.99	1.5
9	1.52	1.5	1.32	1.16
13	1.27	1.23	1.22	1.42
17	1.30	1.22	1.25	1.35
21	1.3	1.16	.9	.47

Figure 18. Diurnal Flow Multipliers in XPSWMM 2014

Attachment A3-1

Table 6. 10-Year 24-Hour Rainfall Depths per Basin

Basin/Site	Rainfall Depth (in)
1	3.25
2	3.4
3A	3.4
4A	3.45
5	3.3
6	3.8
7	3.7
9A	3.9
9B	4.2
9C	4.2
10	3.95
11	3.93
12	3.5
14	3.1
15	3.85
16	4.4
18	4.5
19	4.7
20	4.4
21	4.6
22	5.6
24	4.24
25	4.9
26	4.8
27	4.3
28	3.4
29	3.1
30	3.2
Flume	3.2

From: Joseph Hauser <cuptjoe2@comcast.net>
Sent: Monday, November 25, 2019 11:54 AM
To: Gian Martire <GianM@cupertino.org>; Steven Scharf <SScharf@cupertino.org>; Darcy Paul <DPaul@cupertino.org>; Jon Robert Willey <JWilley@cupertino.org>; Liang Chao <LiangChao@cupertino.org>; Rod Sinks <RSinks@cupertino.org>
Subject: Westport EIR

Please add this email to the public record for the Westport Project

As I cannot attend the proposed Westport Cupertino Project Development meetings, I would like to present several comments. B1-1

1. The project, being on Stevens Creek between Mary Ave and the entrance to 85/280 will negatively impact access to the main corridor toward the city center.This potentially impacts access to all the businesses along Stevens Creek Blvd. B1-2

2. The area surrounding the proposed project is already a highly-impacted area for the following activities. B1-3

   a The main entrance to De Anza College

   b Cupertino Senior Citizens Center

   c The main entrance to Memorial Park where there are numerous city events each year

   d Entrance to two major highways (85 and 280)

   e Access to the city yard facility

   f Access to the city dog park

   g Access to over 300 residential homes

   h Access to a condo complex

   i Access to the Glenbrook Apartments

   j Bicycle path to the Mary Avenue Bridge

3. The state Density Bonus Law allows this project 3 concessions- not more! They also want to remove protected trees, consolidate all BMR housing into one building, not provide a mix of BMR unit sizes, not provide required amount of retail facing Stevens Creek, etc. This is WAY MORE than 3 concessions. In addition, the height concessions is 100% more than what is allowed. Where is the limit? B1-4

4. There is only one other exit area from the area being impacted. Those exits are on to Stelling Ave., and only has a traffic light on Greenleaf and Stelling. Greenleaf has a dangerously sharp S-curve right by Garden Gate Elementary School. The other exits onto Stelling require drivers to try to get onto Stelling B1-5

when there is a break in the traffic. This is virtually impossible during rush hour. With the additional traffic to be generated by this project, many drivers will find an alternative route through the neighborhood and past Garden Gate School. During rush hour, many parents use Greenleaf to let their children disembark from their cars, or cross streets to the school. This is already dangerous and will only get worse. B1-5 continued

5. The proposed height limitation of this project is not in keeping with height limitations along highway 85 for at least a mile radius. B1-6

6. At times the number of cars in the turn lane from Stevens Creek Blvd onto Mary Ave., and the turn lane from Mary onto Stevens Creek Blvd already exceeds the amount of space allocated, thereby causing backups onto regular traffic lanes. This will only get worse. B1-7

7. There are no buildings in this area with heights larger than 2 stories.

I hope the city will take these points into consideration. As a longtime resident of Cupertino, I have witnessed the area becoming a traffic nightmare, and city promises to residents' better quality of life being largely ignored so that developers can get their way. I am not against reasonable growth, but this project is massive, and does not fit into the area being allocated. It will not only impact the immediate area, but will impact the entire city. Recent events have indicated that residents are mostly fed up with the type of projects the city has approved. I hope this project will be an example of a new attitude by the city. B1-8

Thank you.

Joseph Hauser

Comment Letter B2

From: Kent Vincent <deanza_travel@yahoo.com>
Sent: Monday, November 25, 2019 8:36 PM
To: Darcy Paul <DPaul@cupertino.org>; Jon Robert Willey <JWilley@cupertino.org>; Rod Sinks <RSinks@cupertino.org>; Steven Scharf <SScharf@cupertino.org>; Liang Chao <LiangChao@cupertino.org>
Subject: De Anza Hotel and Westport Cupertino GPAs

Dear Council member,

Cupertino residents recently received notices for hearings on two development proposals each requiring General Plan Amendments: the De Anza Hotel and Westport Cupertino. I want to encourage the Council to enforce the City's General Plan when ruling on these and all future development proposals. As you know, General Plans are not intended to be project specific but the blueprint for future development throughout the city. Unfortunately, developers have become accustomed to project-specific GPAs in Cupertino via the actions of prior Councils. Cupertino residents elected a Council majority to end this practice and actively enforce the General Plan. While I know you know this, I just want to give you respectful encouragement noting enforcement has the support of your constituents. . B2-1

I think it is also worth mentioning that freely given project specific GPAs and rezoning encourages property value inflation. Land cost is directly a function of utility and what is, or what is likely to be allowed for development on any given parcel. A Council that holds its ground against GPAs in theory should stabilize land prices so high rise, high density is less of a requirement for development profitability.

Respectfully,

Kent Vincent
Cupertino

Comment Letter B3

From: "harrisau1@gmail.com" <harrisau1@gmail.com>
Date: December 5, 2019 at 1:15:05 AM PST
To: Gian Martire <GianM@cupertino.org>
Cc: Better Cupertino <info@bettercupertino.org>, Harris Au <harrisau1@gmail.com>
Subject: Westport EIR Comments, No more than 50 Residential Units

Dear Sir/Madam,

The Westport proposal to build 242 residential units is way too many. It is obvious that the resulting traffic congestion will be unbearable. Even today the traffic is very heavy during the morning 7-9 am and 4-6 pm periods. Consider all the traffics from Steven's Creek Blvd, HWY 85 and De Anza college.

Besides traffic congestion problems, other issues are in safety for both car and pedestrians, air and noise population, and building height.

The maximum number of residential units in Westport is 50.

B3-1

Thank you for your attention,

Harris au

10393 Noel Ave

Cupertino, CA 95014

Tel 408 921 3339

Comment Letter B4

From: Lee Xu <leelxu@gmail.com>
Sent: Wednesday, December 11, 2019 10:13 PM
To: Gian Martire <GianM@cupertino.org>
Subject: Westport EIR

Dear Sir/Madam,

I am the owner of the house at 21164 Grenola Dr, Cupertino, CA 95014.

Thank you for informing me of the Westport project. I I think the project adds too many new residential units in this already crowded area. Furthermore, the tall building is not in harmony with the surroundings. B4-1

I vote against the project.

Lee Xu

Comment Letter B5

DANIEL L. CARDOZO
CHRISTINA M. CARO
DANIKA L. DESAI
SARA F. DUDLEY
THOMAS A. ENSLOW
ANDREW J. GRAF
TANYA A. GULESSERIAN
KENDRA D. HARTMANN*
KYLE C. JONES
RACHAEL E. KOSS
NIRIT LOTAN
AARON M. MESSING
WILLIAM C. MUMBY
CAMILLE G. STOUGH

MARC D. JOSEPH
Of Counsel

**Admitted in Colorado*

ADAMS BROADWELL JOSEPH & CARDOZO

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SACRAMENTO, CA 95814-4721

TEL: (916) 444-6201
FAX: (916) 444-6209

December 20, 2019

By E-Mail and U.S. Mail

Gian Martire
City of Cupertino
10300 Torre Avenue
Cupertino, CA 95014
gianm@cupertino.org

Re: Westport Mixed-Use Project EIR Comments

Dear Mr. Martire:

We are writing on behalf of Cupertino Residents for Responsible Development to provide comments on the November 2019 Draft Environmental Impact Report ("DEIR") prepared for the Westport Mixed-Use Project proposed by KT Urban. The Project involves demolishing a one-story shopping center and developing an 8.1-acre site for a mixed-use of residential and retail buildings, totaling 242 residential units and 20,000 square feet of retail space. The Project is located at 21267 Stevens Creek Boulevard, approximately 0.1-.03 miles from the De Anza Transit Center. B5-1

According to the DEIR, the Project will require the following approvals from the City of Cupertino ("City"): (1) EIR Certification pursuant to the California Environmental Quality Act ("CEQA"); (2) Development Permit (3) Architectural and Site Approval Permit; (4) Use Permit; (5) Subdivision Map Permit; (6) Heart of the City Exception; (7) tree removal permit; and (8) Encroachment permits from the City and Caltrans.

As explained in these comments, the DEIR does not comply with the requirements of CEQA in several respects: B5-2

First, the DEIR fails to properly analyze and mitigate impacts from air quality and their associated health risks. Specifically, the City failed to properly analyze construction and operational air emissions by underestimating and failing to support their emission projections. As a result, the City failed to disclose, analyze and mitigate a potentially significant health risk that is evident when the DEIR's errors are corrected. B5-2 continued

Second, the DEIR fails to properly disclose, analyze, and mitigate Greenhouse Gas ("GHG") emissions. The DEIR's analysis uses an inapplicable threshold of significance in violation of CEQA and relies on several erroneous and unsupported assumptions which underestimate the Project's actual GHG impacts. B5-3

Third, the DEIR fails to properly disclose, analyze, and mitigate the Project's traffic impacts. The City improperly calculates VMT, at odds with the City's own general plan and California's technical guidance on VMT and fails to include traffic analysis from a major nearby construction project. B5-4

For each of these reasons, the City may not approve the Project until a revised environmental review document is prepared and re-circulated for public review and comment.

These comments were prepared with the assistance of air quality and GHG experts from Soil Water Air Protection Enterprise ("SWAPE") Matt Hagemann, P.G, C.Hg. and Paul E. Rosenfeld, PhD[1], and traffic and civil engineer Dan Smith.[2] SWAPE and Mr. Smith's comments and curriculum vitae are attached hereto as Exhibits A and B respectively and are fully incorporated herein and submitted to the City herewith. Therefore, the City must separately respond to the technical comments of the experts, in addition to our comments. B5-5

I. STATEMENT OF INTEREST

Cupertino Residents for Responsible Development is an unincorporated association of individuals and labor unions that may be adversely affected by the potential environmental impacts of the Project. The association includes Silicon Valley MEPS and its members and those members' families and other individuals that live, recreate, work and raise their families in Santa Clara County, including in and around the City of Cupertino (collectively "Cupertino Residents"). B5-6

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[1] **Exhibit A**: A letter from Matt Hagemann and Paul Rosenfeld to Aaron Messing Re: Comments on the Westport Mixed-Use Project (SCH No. 2019070377), December 20, 2019 ("**SWAPE comments**").

[2] **Exhibit B**: A letter from Daniel Smith to Aaron Messing Re: Westport Mixed Use Project DEIR (SCH 2019070377), December 20, 2019 ("**Smith comments**").

Cupertino Residents supports the development of mixed-use projects where properly analyzed and carefully planned to minimize impacts on public health and the environment. Mixed-use projects should avoid impacts to air quality, public health, water resources and traffic, and should take all feasible steps to ensure unavoidable impacts are mitigated to the maximum extent feasible. Only by maintaining the highest standards can mixed-use development truly be sustainable.

Individual members of Cupertino Residents and the members of the affiliated labor organizations live, work, recreate and raise their families in Santa Clara County, including in and around the City of Cupertino. These members would be directly affected by the Project's environmental and health and safety impacts. Members of Cupertino Residents may also work on the Project itself. Accordingly, these individuals will be first in line to be exposed to any health and safety hazards created by the Project. They each have a personal interest in protecting the Project area from unnecessary, adverse environmental and public health impacts.

B5-6
continued

The organizational members of Cupertino Residents and their members also have an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for businesses to expand in the region, and by making it less desirable for businesses to locate and people to live there. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities.

Finally, the organizational members of Cupertino Residents are concerned with projects that can result in serious environmental harm without providing countervailing economic benefits. CEQA provides a balancing process whereby economic benefits are weighed against significant impacts to the environment.[3] It is in this spirit we offer these comments.

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[3] Pub. Resources Code § 21081(a)(3); *Citizens for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 171.

II. THE DEIR LACKS SUBSTANTIAL EVIDENCE TO SUPPORT ITS CONCLUSIONS ON SIGNIFICANT IMPACTS AND FAILS TO DISCLOSE, ANALYZE, AND MITIGATE POTENTIALLY SIGNIFICANT IMPACTS

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances).[4] The EIR is the very heart of CEQA.[5] "The foremost principle in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[6] B5-7

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.[7] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR "protects not only the environment but also informed self-government."[8] The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[9]

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures.[10] The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced."[11] If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and

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[4] See, e.g., PRC § 21100.
[5] *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.
[6] *Comtys. for a Better Env' v. Cal. Res. Agency* (2002) 103 Cal. App.4th 98, 109 ("*CBE v. CRA*").
[7] 14 CCR § 15002(a)(1).
[8] *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.
[9] *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[10] 14 CCR§ 15002(a)(2) and (3); *see also Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at 564.
[11] 14 CCR §15002(a)(2).

that any unavoidable significant effects on the environment are "acceptable due to overriding concerns."[12]

B5-7

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. *A clearly inadequate or unsupported study is entitled to no judicial deference*."[13] As the courts have explained, "a prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process."[14]

A. The Project description does not provide any information on the types of retail the Project will include, which render the DEIR's analysis on Air Quality, GHGs, and VMT incomplete

B5-8

The DEIR states that the Project will contain "two mixed-use buildings" with a combined approximately 20,000 square feet of retail space on their ground levels.[15] Apart from this information, however, no further description or analysis of the future retail component of the Project is provided in the DEIR.

An accurate and complete project description is necessary to perform an evaluation of the potential environmental effects of a proposed project.[16] Without a complete project description, the environmental analysis will be impermissibly narrow, thus minimizing the project's impacts and undercutting public review.[17] The courts have repeatedly held that "an accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document]."[18] "Only through an accurate view of the project may affected outsiders and public decision makers balance the proposal's benefit against its environmental

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[12] PRC § 21081; 14 CCR § 15092(b)(2)(A) & (B).

[13] *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), *quoting, Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 391 409, fn. 12.

[14] *Berkeley Jets*, 91 Cal.App.4th at 1355; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 946.

[15] DEIR, p. 1-1.

[16] *See, e.g., Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376.

[17] *See id.*

[18] *County of Inyo v. County of Los Angeles* (1977) 71 Cal.App.3d 185, 193.

costs."[19] CEQA Guidelines § 15378 defines "project" to mean "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."[20]

Without any discussion of the types of retail to be included in the Project, key elements that would comprise the Project's Air Quality, GHG, and Traffic impacts analysis are missing. For example, "[t]he existing shopping plaza, which contains many local serving uses like cheap restaurants, dentists, nail shops, and dance studios, attracts considerably more local trips than a shopping center that has specialty shops that people drive for longer distances to get to. These differences in retail may significantly increase the VMT and GHG impacts of the project, and without more information, the DEIR cannot make reliable conclusions as to those impacts."[21]

B5-8
continued

While a Project is entitled to some flexibility with implementation of the Project beyond the project description, there is no practical reason why the City does not provide broad categories of retail to be included in the Project, such that a significantly more accurate rendering of the Project's impacts could be made.[22] The City must include this information in a recirculated DEIR and make adjustments to its air quality, GHG, and traffic analyses accordingly.

B. The DEIR fails to identify, analyze, and mitigate the Project's air quality impacts and associated health risks

B5-9

Under CEQA, lead agencies must consider a project's impacts on air quality, including whether the project will "expose sensitive receptors to substantial pollutant concentrations."[23] The DEIR's air quality analysis relies on emissions calculated with the California Emission Estimator Model ("CalEEMod") 2016.3.2. The model uses site-specific information, such as land use type, meteorological data,

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[19] *Id.* at 192-193.
[20] 14 CCR § 15378.
[21] Smith Comments, p. 1.
[22] *See Stopthemillenniumhollywood.com v. City of Los Angeles* (2019) 39 Cal. App. 5th 1 (finding that a project description was insufficient when there were no practical impediments to why the developer could not have provided an accurate, stable, and finite definition of what it intended to build.).
[23] CEQA Guidelines, Appendix G, Section III: Air Quality.

total lot acreage, project type and typical equipment associated with project type to calculate a project's construction and operational emissions.

After reviewing the DEIR, SWAPE concluded that "several of the values inputted into the model were not consistent with information disclosed in the DEIR" and that the DEIR incorrectly evaluates diesel particulate matter emissions.[24] As a result, the DEIR completely fails to identify and mitigate against a potentially significant health risk impact resulting from Project emissions. The City must remedy this failure by recirculating a DEIR with the potentially significant impact disclosed, analyzed, and mitigated.

B5-9
continued

1. <u>The DEIR underestimates air quality impacts</u>

In their review, SWAPE determined that at least three inputs from the DEIR's CalEEMod analysis were underestimated and did not reflect disclosed information about the Project from the DEIR. They also determined that certain mitigation measures outlined by the DEIR are unverified and therefore may underestimate the Project's construction and operational emissions. If adjusted, the revised CalEEMod conclusions result in the finding of a potentially significant health risk impact, explained in section II(B)(3).

B5-10

a) *Multiple CalEEMod inputs contradict Project estimations from the DEIR*

SWAPE notes that while the Project proposes to construct a 148,040 square foot parking garage, the DEIR's CalEEMod inputs only include 92,800 square feet of enclosed parking structure, an underestimation of 55,240 square feet.[25] SWAPE also found that the DEIR's CalEEMod transportation assessment underestimates the weekend trip rate by 242 trips based on the DEIR's own estimation of projected daily trips for the Project.[26] Through both of these underestimations, the DEIR underestimates the Project's construction and operational emissions and leads to an inadequate analysis of health impacts.

B5-11

Additionally, SWAPE determined that the pass-by trips expected to occur throughout the Project's operation were double counted by the DEIR's analysis, and

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[24] SWAPE Comments, p. 2.
[25] SWAPE Comments, pp. 2-3.
[26] SWAPE Comments, p. 4.

therefore, the Project's operational emissions were underestimated.[27] According to Appendix A of the CalEEMod User's Guide, the primary trips utilize the complete trip lengths associated with each trip type category.[28] Diverted trips are assumed to take a slightly different path than a primary trip and are assumed to be 25% of the primary trip lengths. Pass-by trips are assumed to be 0.1 miles in length and are a result of no diversion from the primary route.[29] Here, the DEIR counts the pass-by trips both in its land use analysis *and* in its transportation assessment.[30] And as a result, "the emissions associated with these trips are underestimated and as a result, the Project's mobile-source operational emissions are underestimated."[31] B5-11 continued

These underestimations are compounded by the DEIR's failure to include any information about the types of retail the Project will contain. As established above, different types of retail could have substantially different implications for the projections of daily trips or of trip purposes, both of which would have air quality impacts. As a result, the Project's air quality analysis is unreliable and cannot constitute substantial evidence that no significant effect will occur from construction and operation of the Project.

b) Multiple mitigation measures are unverified and may result in underestimated emissions

B5-12

Next, SWAPE identified at least two mitigation measures that are inadequately verified in the CalEEMod inputs, which may result in the DEIR underestimating the Project's air emissions. The Project's CalEEMod output files demonstrate that the model included a 6 percent reduction from "Clean Paved Roads" and a 12 percent moisture content for "Water Unpaved Roads" (Appendix C, pp. 40, 69, 94). The CalEEMod User's Guide requires that any non-default values inputted must be justified,[32] and the DEIR includes a justification: "Per BAAQMD basic control measures."[33]

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[27] SWAPE Comments, p. 6.

[28] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." *SCAQMD*, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 20

[29] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." *SCAQMD*, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 20

[30] SWAPE Comments, pp. 5-6.

[31] SWAPE Comments, p. 6.

[32] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13.

[33] DEIR, Appendix C, pp. 40, 69, 94.

The DEIR purports to implement BAAQMD Basic Construction Mitigation Measures through Mitigation Measure AQ-2, which requires the preparation of a Construction Management Plan. However, "none of these measures [required in Mitigation Measures AQ-2] discusses the 6 percent or 12 percent reductions included in the model, and as a result, these reduction percentages cannot be verified. Furthermore, none of these measures address the replacement of ground cover, and as a result, the inclusion of this measure is unsubstantiated."[34] As a result, SWAPE concludes "the model may underestimate the Project's construction emissions."[35] B5-13

In addition, SWAPE identified two additional operational mitigation measures that were included in the DEIR's CalEEMod modeling, but no justifications or substantiations are provided for these measures.[36] SWAPE again concludes that "the implementation of these measures cannot be verified, and the model should not be relied upon to determine Project significance."[37]

2. The Health Risk Assessments relied upon by the DEIR cannot constitute substantial evidence

SWAPE's analysis indicates that the DEIR's construction and operational health risk assessments ("HRAs") are incomplete and must be revised in order to be relied upon by the City. B5-14

Although the DEIR concludes that:

> As described above, worst-case construction risk levels based on screening-level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds"[38]

We have already shown above that the CalEEMod model incorrectly underestimates construction emissions. Thus, the DEIR's construction HRA relies on a flawed analysis of air emissions, and the City must revise the air analysis before it can reliably compute the health risks associated with the Project's construction.

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[34] SWAPE Comments, p. 7.
[35] SWAPE Comments, p. 7.
[36] SWAPE Comments, pp. 7-8.
[37] SWAPE Comments, p. 8.
[38] DEIR, Appendix C, p. 26.

With respect to the Project's operational health risk analysis, the DEIR only analyzes the risk posed to *future* sensitive receptors *on the Project site¸* not to risks posed to *nearby, existing* sensitive receptors as a result of the Project's operation.[39] This stands in contrast with the "recommendations set forth by the Office of Environmental Health and Hazard Assessment's (OEHHA) most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was cited in the DEIR."[40] OEHHA recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR). Failing to prepare an operational HRA to nearby, existing sensitive receptors is inconsistent with this guidance and thus, the DEIR has failed to provide substantial evidence that no health risk is associated with the Project.[41] B5-15

SWAPE's also found that the DEIR failed "to sum [the excess cancer risk calculated for each age group in order] to evaluate the total cancer risk over the course of the Project's lifetime, including both construction and operation."[42] SWAPE concludes that "[t]his is incorrect and thus, an updated analysis should quantify the Project's construction and operational health risks and then sum them to compare to the BAAQMD threshold of 10 in one million."[43] Without correction, the DEIR fails to comply with OEHHA guidance and its analysis fails to constitute substantial evidence. B5-16

3. A screening-level HRA correcting for the errors in the DEIR's CalEEMod inputs indicates a potentially significant health risk impact

B5-17

In contrast to the DEIR's HRAs, SWAPE prepared a screening level HRA using corrected inputs for diesel particulate matter and assumptions "[c]onsistent with recommendations set forth by the 2015 OEHHA guidance."[44] With this data,

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[39] SWAPE Comments, p. 9.

[40] DEIR, Appendix C, p. 26; "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[41] *See* SWAPE Comments, p. 9.

[42] SWAPE Comments, p. 10.

[43] SWAPE Comments, p. 10.

[44] SWAPE Comments, p. 10.

shown below, SWAPE projects that over the course of Project construction and operation, the excess cancer risks posed to adults, children, infants, and during the third trimester of pregnancy "are approximately 4.9, 32, 100, and 4.6 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor is approximately 140 in one million, thus resulting in a potentially significant health risk impact not previously addressed or identified by the DEIR."[45]

B5-17 continued

The Maximally Exposed Individual at a Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk
Construction	0.25	0.3953	361	10	4.6E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***4.6E-06***
Construction	1.75	0.3953	1090	10	9.7E-05
Operation	0.25	0.1217	1090	10	4.2E-06
Infant Exposure Duration	***2.00***			***Infant Exposure***	***1.0E-04***
Operation	14.00	0.1217	572	3	3.2E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***3.2E-05***
Operation	14.00	0.1217	261	1	4.9E-06
Adult Exposure Duration	***14.00***			***Adult Exposure***	***4.9E-06***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**1.4E-04**

The City must include this potentially significant impact in its analysis of air quality impacts in a recirculated EIR. Without it, the DEIR violates CEQA's mandate that the City disclose and mitigate the Project's potentially significant impacts.

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[45] SWAPE Comments, p. 13.

C. The DEIR fails to disclose, analyze, and mitigate the Project's Greenhouse Gas impacts

The DEIR's greenhouse gas ("GHG") analysis states that the proposed Project would result in a significant impact if it would (1) generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment or (2) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.[46] B5-18

We reviewed the GHG analysis with the assistance of SWAPE. As described below, our review found that the DEIR's GHG analysis violates the law and is not supported by substantial evidence. The DEIR's conclusions are not supported for three main reasons. First, the DEIR fails to use a threshold which is applicable to the Project's built-out year, in violation of CEQA. Second, even for the threshold the DEIR did use, its GHG analyses rely on several incorrect assumptions that result in a substantial underestimation of Project-related GHGs, as described below. Third, the DEIR fails to demonstrate consistency with the Cupertino CAP.

1. <u>The GHG analysis relies on an inapplicable threshold in violation of CEQA</u>

Under the CEQA Guidelines, which have been recently updated, a lead agency must analyze a project's impacts on GHG emissions.[47] The Guidelines allow for several approaches to this analysis, both qualitative and quantitative. The Guidelines explicitly mandate, however, that the "analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes."[48] B5-19

The DEIR analysis relies on the tiered approach developed by the Bay Area Air Quality Management District ("BAAQMD") for assessing the impacts of land use development projects. If a project is within the jurisdiction of an agency that has a "qualified" GHG reduction strategy, the project can assess consistency of its GHG emissions impacts with the reduction strategy. BAAQMD has adopted screening criteria and significance criteria for development projects that would be applicable for the proposed project. If a project exceeds the BAAQMD Guidelines'

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[46] DEIR, p. 4.5-15.

[47] 14 CCR §15064.4.

[48] 14 CCR §15064.4(b)

GHG screening-level sizes, the proposed project would be required to conduct a GHG emissions analysis using the BAAQMD significance criteria of 1,100 million metric tons of carbon dioxide equivalent per year per year (MTCO2e per year). Here, the DEIR analyzed the Project's annual emissions and found they were below the "bright-line" threshold.

BAAQMD's significance threshold, however, is not applicable to the Project, and relying on it violates CEQA. BAAQMD's thresholds, included in the district's 2017 CEQA Guidelines, were developed to comply with the state reduction target as it is embodied in AB 32,[49] which mandates that statewide greenhouse gas emissions be reduced to 1990 levels by the target year 2020.[50] In 2016, the state passed SB 32,[51] which codified a new statewide 2030 GHG emissions reduction target of 40% below 1990 levels. Following the new legislation, the California Air Resources Board ("CARB") adopted in December 2017 a new scoping plan to outline the strategy needed to achieve SB 32 GHG targets. These are the binding "state regulatory scheme" that the CEQA Guidelines require agencies to account for.

B5-19
continued

The BAAQMD Guidelines do not account for or include any numeric threshold for compliance with SB 32 or the scoping plan and are therefore not applicable to projects that will be built and operated beyond the AB 32 target year.[52] Because the Project's first fully operational year would be 2023, and it would continue to operate many years beyond that, the City must analyze the Project for its compatibility with the state's mandated goals for, at the very least, the year 2030.[53]

BAAQMD *itself* advises lead agencies not to rely on its numeric significance thresholds and instead advises they make significance determinations based on the most recent state greenhouse gas reduction targets. For example, in recent comment letters to lead agencies, BAAQMD stated as follows:

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[49] See, California Environmental Quality Act Air Quality Guidelines, Bay Area Air Quality Management District, May 2017, at p. D-27.
[50] California Air Resources Board, Assembly Bill 32 Overview; available at: https://www.arb.ca.gov/cc/ab32/ab32.htm, accessed April 3, 2019.
[51] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32
[52] See also *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497.
[53] SWAPE Comments, p. 21.

> The Air District encourages the City to make a significance determination for greenhouse gas impacts based on the most recent State greenhouse gas targets and CEQA guidance. The Air District's 2010 CEQA guidelines are based on the State's 2020 greenhouse gas targets. These targets have been superseded by the State's 2030 and 2050 climate stabilization goals and by the most recent draft of the AB 32 Scoping Plan written by the California Air Resources Board.[54]
>
> The GHG impact analysis should include an evaluation of the Plan's consistency with the California Air Resources Board 2017 Scoping Plan and State and Air District climate stabilization goals for 2030 and 2050. Please be advised that the Air District is in the process of updating the CEQA guidelines/thresholds and current thresholds for GHGs should not be used for this plan.[55]

B5-19
continued

BAAQMD is in the process of updating its current CEQA Guidelines and thresholds of significance.[56] The Draft EIR must be revised to analyze the Project's compatibility with the reduction targets set in SB 32, which go beyond those set in AB 32. As it is now, the DEIR's analysis violates both CEQA and the Supreme Court rulings on GHG analysis and cannot constitute substantial evidence.

2. <u>The DEIR significantly underestimates GHG emissions from the Project</u>

B5-20

a) *The DEIR does not support its conclusion that the Project will result in a net change of 359 MTCO2e/Year*

The DEIR claims "that the proposed project would generate 1,843 MTCO2e per year."[57] However, because, the project site is currently developed with

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[54] Greg Nudd, BAAQMD, Letter to Joshua McMurray, Oakley, CA, Oakley Logistics Center Project, March 21, 2019; available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa-letters/2019/2019_03_21_city_of_oakley_oakley_logistics_center_nop-pdf.pdf?la=en, accessed April 12, 2019.

[55] Greg Nudd, BAAQMD, Letter to Alicia Parker, City of Oakland, RE: Downtown Oakland Specific Plan - Notice of Preparation of a Draft Environmental Impact Report, February 15, 2019; available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa-letters/2019/downtown_oakland_specific_plan_eir_notice_of_preparation_021519-pdf.pdf?la=en

[56] BAAQMD, CEQA Guidelines Update Underway; available at: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed April 9, 2019.

[57] DEIR, p. 4.5-17.

approximately 71,250 square-feet of shopping center, which generates 1,484 MTCO2e per year, the proposed project's emissions would represent a net increase in GHG emissions of 359 MTCO2e per year."[58] It therefore concludes that the Project "would not result in an increase in GHG emissions that exceed the BAAQMD's bright-line screening threshold of 1,100 MTCO2e per year."[59]

B5-20

However, this net increase assumes, without support in the record, that the current emissions at the Project site will disappear after the Project is completed. This is contrary to common sense and the CEQA requirement that the "lead agency…make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."[60] Under this mandate, the City must provide substantial evidence to support its conclusion that the Project's existing emissions sources will be extinguished by the new project and not simply displaced.[61] The City has not done so here.

b) The DEIR's GHG analysis relies upon an incorrect and unsubstantiated air model, unsubstantiated assumptions, and unsubstantiated mitigation measures that underestimate GHGs associated with the Project

B5-21

Similar to the conclusion reached in section II(b)(1) of these comments, the DEIR's analysis of GHGs relies on underestimated inputs, unsubstantiated assumptions about the Project's retail components, and unsupported mitigation measures that significantly underestimate the GHG emissions associated with the Project. The City must correct for these underestimations in a recirculated DEIR.

3. <u>The Cupertino CAP Measures are Not Properly Incorporated in The Project</u>

B5-22

CEQA states that for a DEIR to rely on a CAP in its analysis, it must identify which requirements apply to the Project and make those requirements binding and

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[58] DEIR, p. 4.5-17.
[59] DEIR, p. 4.5-17.
[60] CEQA Guidelines, § 15064.4, subd. (a)
[61] *See Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal. App. 4th 859 (holding that an environmental baseline is to be construed broadly to ensure the fullest protection to the environment and cannot be narrowly defined by the project site if evidence indicates the Project's environmental damage will occur beyond the boundaries of the Project site.).

enforceable to the Project by listing them as mitigation measures, if they are not already binding and enforceable in the City's CAP:

> An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project.[62]

B5-22

Here, the DEIR fails to demonstrate consistency with the City's CAP as required by CEQA. Although it mentions certain steps taken in coordination with the CAP's community-wide measures, it fails to incorporate any project-level measures from the CAP or include any of the CAP's measures as binding mitigation in the DEIR.[63] SWAPE also indicates that even for the inapplicable community-wide measures relied upon by the DEIR, it also fails to demonstrate consistency with those community-wide measures.[64] Without more, the DEIR has not provided substantial evidence of consistency with the City's CAP.

D. The DEIR fails to disclose, analyze, and mitigate the Project's Traffic Impacts

B5-23

CEQA requires the City to analyze the Project's direct, indirect and cumulative impacts from traffic generated by the Project. We reviewed the DEIR and the Transportation Analysis (TA) with the assistance of Dan Smith, a Civil and Traffic Engineer. Mr. Smith's review found that the City's analysis of transportation impacts is inadequate for several reasons: The TA produces an inaccurate analysis of VMT impacts; and the TA makes no accounting of traffic impacts evident from Cupertino's Vallco Project and EIR; and the DEIR does not disclose many CalEEMod parameters that may have an impact on model outcomes.

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[62] 14 CCR § 15183.5.
[63] SWAPE Comments, p. 15.
[64] SWAPE Comments, p. 15.

1. The DEIR's VMT analysis does not accurately analyze VMT impacts

The DEIR purports to comply with Section 15064.3(b)(1) in its conclusion that VMT impacts from the Project would be less than significant.[65] However, the DEIR's analysis appears to contain several deficiencies that call into question the underlying analysis.

B5-24

First, the DEIR appears to combine both the residential and commercial land uses in its VMT analysis, despite the CEQA Technical Advisory for VMT advising that "[c]ombining land uses for VMT analysis is not recommended…[because c]ombining land uses for a VMT analysis could streamline certain mixes of uses in a manner disconnected from policy objectives or environmental outcomes. Instead, OPR recommends analyzing each use separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold."[66] The DEIR fails to do this or justify its decision not to follow the technical advisory, and as a result, the DEIR's VMT analysis is unreliable.

Next, the DEIR's VMT conclusion includes an analysis of the approximate *annual or daily* VMT of the Project and the existing site. However, this too goes against the guidance from the Technical Advisory, which states:

> When assessing climate impacts of some types of land use projects, use of an efficiency metric (e.g., per capita, per employee) may provide a better measure of impact than an absolute numeric threshold.

B5-25

Thus, the Technical Advisory explicitly recommends an assessment of VMT impacts in per capita over absolute numeric impacts for climate related transportation improvements, which is the ultimate goal in the Cupertino General Plan's push for VMT.[67] What's more, in its analysis, the DEIR cites the Cupertino General Plan EIR, which calculated its VMT projections in per capita, not annual or daily.

The City must correct its VMT analysis to include a separate analysis of the projected VMT from residential and retail or on the dominant use. The City must also modify its analysis to reflect a per capita comparison, in line with the Technical

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[65] DEIR, p. 4.8-23.

[66] Technical Advisory on Evaluating Transportation Impacts in CEQA, p. 6 (Dec. 2018).

[67] Cupertino General Plan M-23

Advisory, and to be able to better compare to the City’s VMT goals, not the existing land use. B5-25 continued

2. The DEIR ignores development from the Vallco Project

B5-26 Mr. Smith indicates that a large project in Cupertino near the Project site (“Vallco Project”) was not included in the DEIR’s traffic impacts analysis. Although he notes that some of the Vallco Project’s approvals have been repealed, the certifying FEIR for the Vallco Project has not been repealed and there remains the potential that some form of the prior project will be implemented. Specifically, one of the alternatives would “involve 23,417 net new trips daily, including 307 in the AM peak and 2,398 in the PM peak hour that were not present when the counts supporting the Westport DEIR analysis were conducted.”[68] Without analyzing the additional impact from the Vallco Project, the Project’s traffic analysis is fundamentally incomplete and cannot constitute substantial evidence supporting a conclusion of less than a significant impact.

3. The DEIR does not include the underlying CalEEMod inputs that would allow for review of the DEIR’s VMT analysis

B5-27 Although the DEIR indicates that VMT “were calculated using California Emissions Estimator Model (CalEEMod),” the DEIR does not contain many relevant CalEEMod inputs for review to determine the validity of the DEIR’s VMT conclusions, including trip length or trip purpose.[69] As Mr. Smith notes, “it is important for the public to understand whether data from local traffic models has been employed or the outcome is just the product of default values. The must clarify whether local values have been substituted for default values and if not, why not.”[70] Without this information, the DEIR cannot support their conclusion of no significant impact with substantial evidence.

III. CONCLUSION

B5-28 The DEIR is inadequate as an environmental document because the City fails to properly disclose, analyze and mitigate the Project’s significant impacts on air quality, public health, GHGs and transportation. The City cannot approve the

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[68] Smith Comments, p. 2.
[69] Smith Comments, p. 2.
[70] Smith Comments, p. 2.

Project until it prepares and re-circulates a revised DEIR that resolves these issues and complies with CEQA's requirements. B5-28 continued

Thank you for your consideration of these comments.

Sincerely,

Aaron M. Messing

Attachments

AMM:acp

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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December 20, 2019

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Subject: **Comments on the Westport Mixed-Use Project (SCH No. 2019070377)**

Dear Mr. Messing,

We have reviewed the November 2019 Draft Environmental Impact Report ("DEIR") for the Westport Mixed-Use Project ("Project") located in the City of Cupertino ("City"). The Project proposes to construct 18 buildings, including three rowhouse buildings, 13 townhouse buildings, and two mixed-use buildings, with 242 residential units and 20,000 square feet of retail space on the 8.1-acre Project site. B5-29

Our review concludes that the DEIR fails to adequately evaluate the Project's Air Quality, Health Risk, and Greenhouse Gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the surrounding environment. B5-30

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (CEQA) requires that such changes be B5-31

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[1] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.

justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.[3]

B5-31 continued

Review of the Project's air modeling, provided as Appendix C to the DEIR, demonstrates that the DEIR underestimates emissions associated with Project activities. As previously stated, the DEIR's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in the Air Quality and Greenhouse Gas Impact Analysis, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. An updated EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Use of an Underestimated Land Use Size

Review of the Project's CalEEMod output files demonstrates that the size of the proposed parking garage was underestimated within the model, and as a result, emissions may be underestimated by the model.

B5-32

According to the DEIR the Project proposes to construct a 148,040 square foot parking garage (see excerpt below) (p. 3-12, Table 3-1).

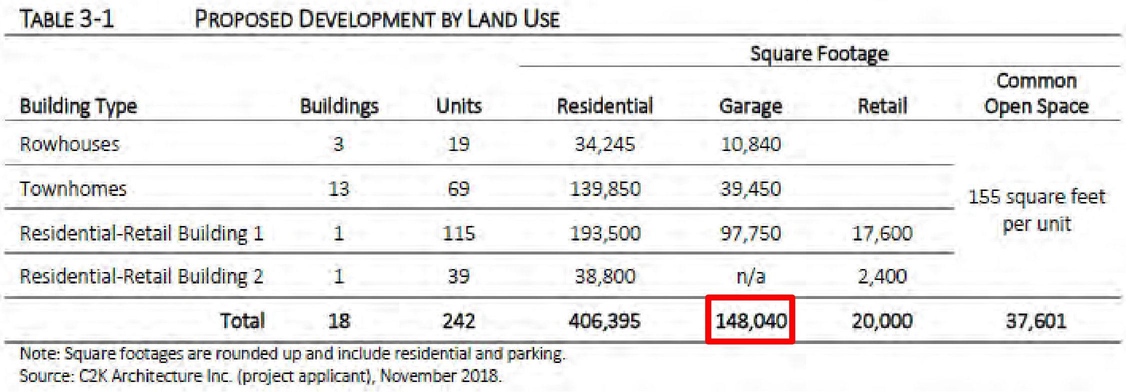

TABLE 3-1 PROPOSED DEVELOPMENT BY LAND USE

			Square Footage			
Building Type	Buildings	Units	Residential	Garage	Retail	Common Open Space
Rowhouses	3	19	34,245	10,840		155 square feet per unit
Townhomes	13	69	139,850	39,450		
Residential-Retail Building 1	1	115	193,500	97,750	17,600	
Residential-Retail Building 2	1	39	38,800	n/a	2,400	
Total	18	242	406,395	148,040	20,000	37,601

Note: Square footages are rounded up and include residential and parking.
Source: C2K Architecture Inc. (project applicant), November 2018.

As you can see in the above excerpt, the Project proposes 148,040 square feet of garage. However, review of the CalEEMod output files demonstrates that the model only included 92,800 square feet of enclosed parking structure (see excerpt below) (Appendix C, pp. 39, 68, 93).

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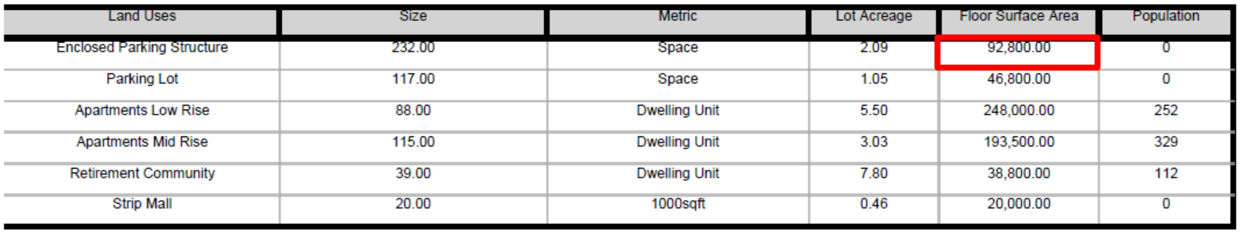
[2] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 1, 9.

[3] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, fn 1, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.



Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	232.00	Space	2.09	92,800.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

B5-32
continued

As you can see in the excerpt above, the model underestimated the parking garage by 55,240 square feet. As previously stated, the land use type and size features are used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations, such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).[4] By underestimating the size of the proposed parking garage, the model underestimates the Project's construction and operational emissions and should not be relied upon to determine Project significance.

Underestimated Sunday trip Rates

Review of the Project's CalEEMod output files demonstrates that the Sunday trip rates for the proposed Project are underestimated. As a result, the Project's mobile-source operational emissions are underestimated.

B5-33

According to the Transportation Assessment (TA), provided as Appendix H to the DEIR, the Project would generate approximately 1,934 total daily trips (see excerpt below) (Appendix H, p. 4, Table 2).

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[4] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 18.

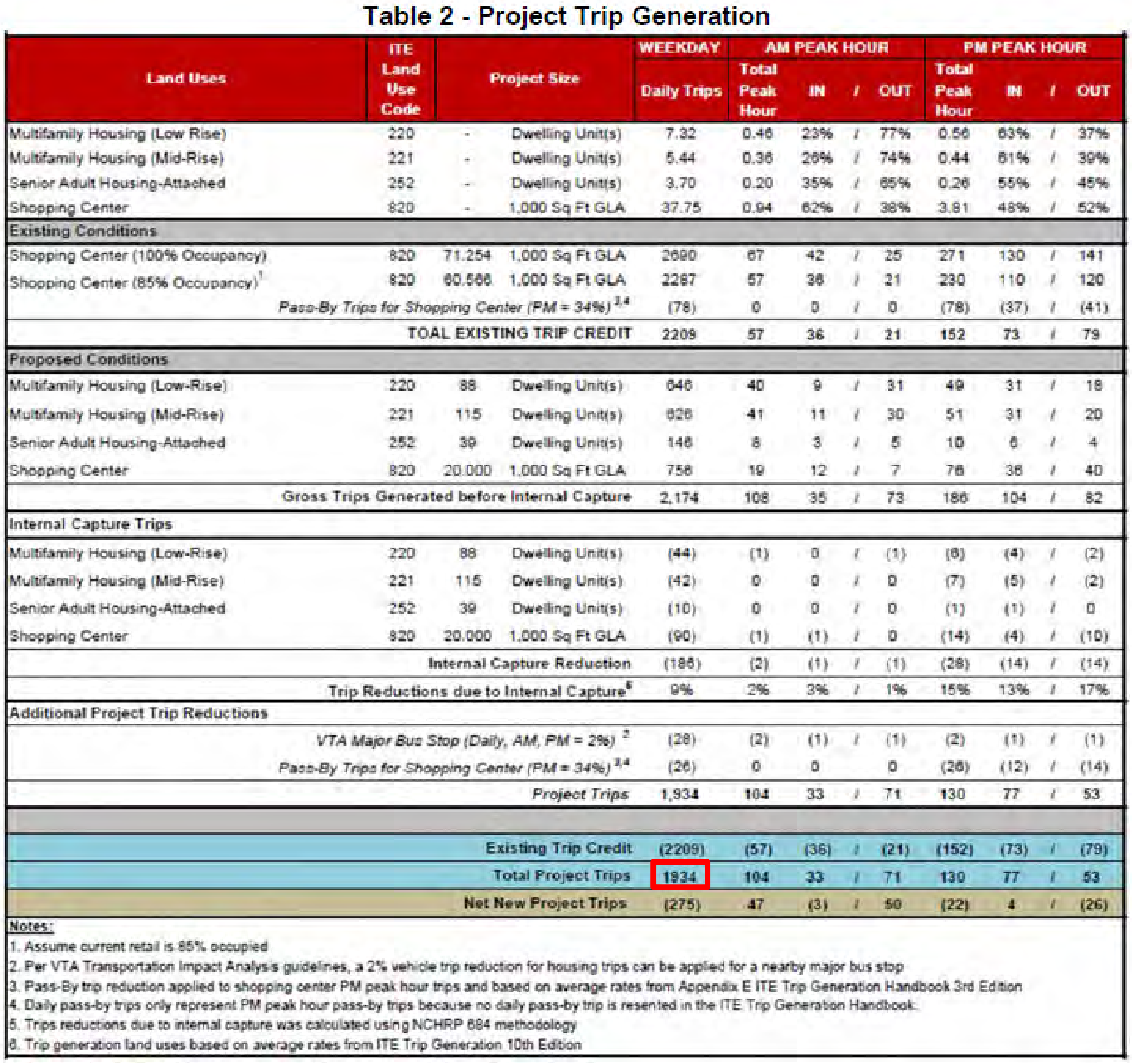


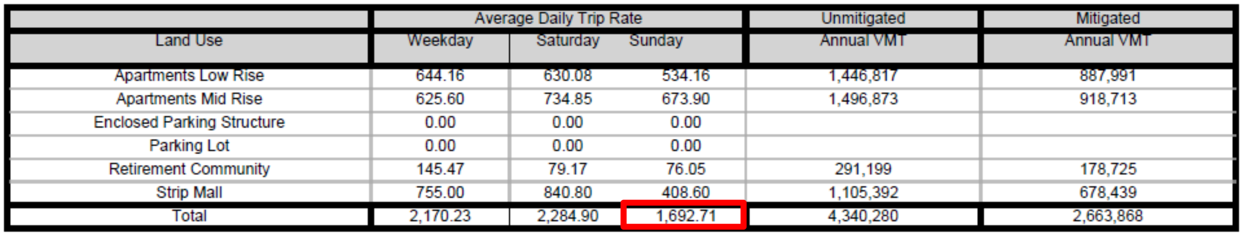
Table 2 - Project Trip Generation

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR				PM PEAK HOUR			
				Daily Trips	Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Multifamily Housing (Low Rise)	220	-	Dwelling Unit(s)	7.32	0.46	23%	/	77%	0.56	63%	/	37%
Multifamily Housing (Mid-Rise)	221	-	Dwelling Unit(s)	5.44	0.36	26%	/	74%	0.44	61%	/	39%
Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35%	/	65%	0.26	55%	/	45%
Shopping Center	820	-	1,000 Sq Ft GLA	37.75	0.94	62%	/	38%	3.81	48%	/	52%
Existing Conditions												
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42	/	25	271	130	/	141
Shopping Center (85% Occupancy)[1]	820	60.566	1,000 Sq Ft GLA	2287	57	36	/	21	230	110	/	120
Pass-By Trips for Shopping Center (PM = 34%)[3,4]				(78)	0	0	/	0	(78)	(37)	/	(41)
TOAL EXISTING TRIP CREDIT				2209	57	36	/	21	152	73	/	79
Proposed Conditions												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	646	40	9	/	31	49	31	/	18
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	626	41	11	/	30	51	31	/	20
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	146	8	3	/	5	10	6	/	4
Shopping Center	820	20.000	1,000 Sq Ft GLA	756	19	12	/	7	76	36	/	40
Gross Trips Generated before Internal Capture				2,174	108	35	/	73	186	104	/	82
Internal Capture Trips												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(44)	(1)	0	/	(1)	(6)	(4)	/	(2)
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	(42)	0	0	/	0	(7)	(5)	/	(2)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(10)	0	0	/	0	(1)	(1)	/	0
Shopping Center	820	20.000	1,000 Sq Ft GLA	(90)	(1)	(1)	/	0	(14)	(4)	/	(10)
Internal Capture Reduction				(186)	(2)	(1)	/	(1)	(28)	(14)	/	(14)
Trip Reductions due to Internal Capture[5]				9%	2%	3%	/	1%	15%	13%	/	17%
Additional Project Trip Reductions												
VTA Major Bus Stop (Daily, AM, PM = 2%)[2]				(28)	(2)	(1)	/	(1)	(2)	(1)	/	(1)
Pass-By Trips for Shopping Center (PM = 34%)[3,4]				(26)	0	0		0	(26)	(12)	/	(14)
Project Trips				1,934	104	33	/	71	130	77	/	53
Existing Trip Credit				(2209)	(57)	(36)	/	(21)	(152)	(73)	/	(79)
Total Project Trips				1934	104	33	/	71	130	77	/	53
Net New Project Trips				(275)	47	(3)	/	50	(22)	4	/	(26)

Notes:
1. Assume current retail is 85% occupied
2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook.
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

As you can see in the above excerpt, the TA estimated approximately 1,934 daily trips for the Project. However, review of the Project's CalEEMod output files demonstrates that the model calculated a value of 1,692.71 total daily trips for Sunday (see excerpt below) (Appendix C, pp. 58, 87, 112).

B5-33



Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	534.16	1,446,817	887,991
Apartments Mid Rise	625.60	734.85	673.90	1,496,873	918,713
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	76.05	291,199	178,725
Strip Mall	755.00	840.80	408.60	1,105,392	678,439
Total	2,170.23	2,284.90	1,692.71	4,340,280	2,663,868

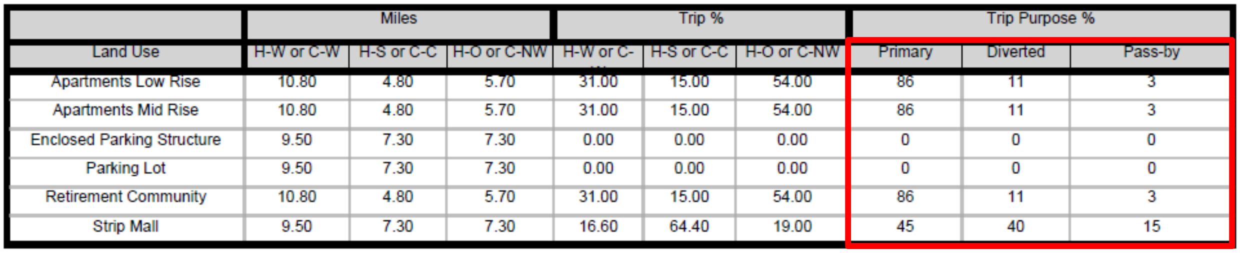
As you can see in the above excerpt, the number of total daily trips calculated by the model for Sunday was underestimated by approximately 242 trips and is thus inconsistent with the information provided in the TA. As a result, the model may underestimate the Project's operational emissions and should not be relied upon to determine Project significance.

Use of Incorrect Trip Purpose Percentages

Review of the Project's CalEEMod output files demonstrate that the model double counts the number of pass-by trips expected to occur throughout Project operation. As a result, the model underestimates the Project's operational emissions.

B5-34

CalEEMod separates the operational trip purposes into three categories: primary, diverted, and pass-by trips. According to Appendix A of the CalEEMod User's Guide, the primary trips utilize the complete trip lengths associated with each trip type category. Diverted trips are assumed to take a slightly different path than a primary trip and are assumed to be 25% of the primary trip lengths. Pass-by trips are assumed to be 0.1 miles in length and are a result of no diversion from the primary route.[5] Review of the Project's CalEEMod output files demonstrates that the trip purpose percentage was divided amongst primary, diverted, and pass-by trip types for the Project's shopping center land use (see excerpt below) (Appendix C, pp. 58, 59, 87, 112).



	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

As you can see in the above excerpt, pass-by trips account for 15% of the strip mall land use's trips. However, as demonstrated in the DEIR's Transportation Assessment (TA), pass-by trips for this land use were already accounted for in the Project Trip Generation calculations (see excerpt below) (Appendix H, p. 4, Table 2).

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[5] "CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod." *SCAQMD, available at:* http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 20

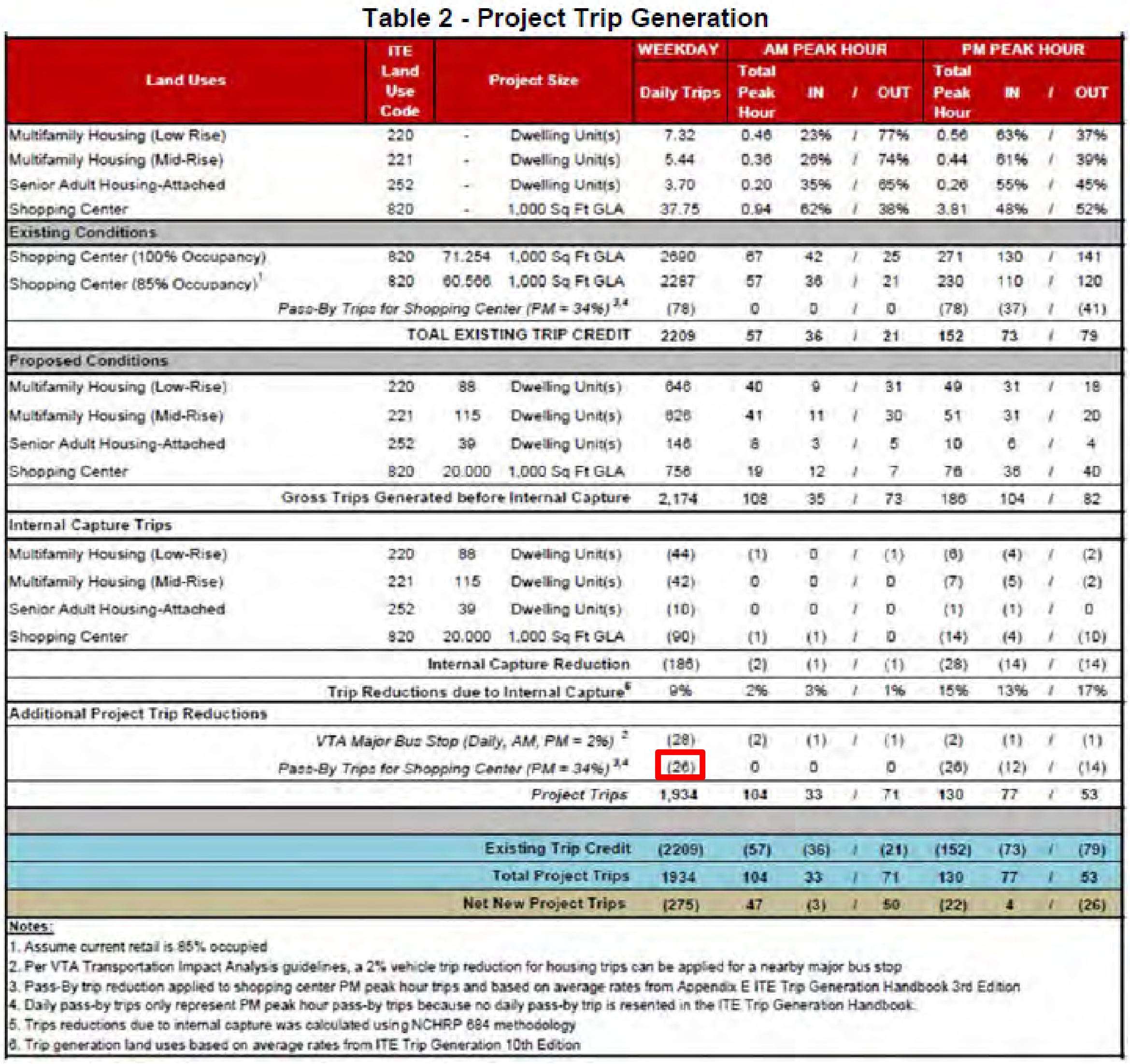

Table 2 - Project Trip Generation

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR				PM PEAK HOUR			
				Daily Trips	Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Multifamily Housing (Low Rise)	220	-	Dwelling Unit(s)	7.32	0.46	23%	/	77%	0.56	63%	/	37%
Multifamily Housing (Mid-Rise)	221	-	Dwelling Unit(s)	5.44	0.36	26%	/	74%	0.44	61%	/	39%
Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35%	/	65%	0.26	55%	/	45%
Shopping Center	820	-	1,000 Sq Ft GLA	37.75	0.94	62%	/	38%	3.81	48%	/	52%
Existing Conditions												
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42	/	25	271	130	/	141
Shopping Center (85% Occupancy)[1]	820	60.566	1,000 Sq Ft GLA	2287	57	36	/	21	230	110	/	120
Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(78)	0	0	/	0	(78)	(37)	/	(41)
TOAL EXISTING TRIP CREDIT				2209	57	36	/	21	152	73	/	79
Proposed Conditions												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	646	40	9	/	31	49	31	/	18
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	626	41	11	/	30	51	31	/	20
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	146	8	3	/	5	10	6	/	4
Shopping Center	820	20.000	1,000 Sq Ft GLA	756	19	12	/	7	76	36	/	40
Gross Trips Generated before Internal Capture				2,174	108	35	/	73	186	104	/	82
Internal Capture Trips												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(44)	(1)	0	/	(1)	(6)	(4)	/	(2)
Multifamily Housing (Mid-Rise)	221	115	Dwelling Unit(s)	(42)	0	0	/	0	(7)	(5)	/	(2)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(10)	0	0	/	0	(1)	(1)	/	0
Shopping Center	820	20.000	1,000 Sq Ft GLA	(90)	(1)	(1)	/	0	(14)	(4)	/	(10)
Internal Capture Reduction				(186)	(2)	(1)	/	(1)	(28)	(14)	/	(14)
Trip Reductions due to Internal Capture[5]				9%	2%	3%	/	1%	15%	13%	/	17%
Additional Project Trip Reductions												
VTA Major Bus Stop (Daily, AM, PM = 2%) [2]				(28)	(2)	(1)	/	(1)	(2)	(1)	/	(1)
Pass-By Trips for Shopping Center (PM = 34%) [3,4]				(26)	0	0		0	(26)	(12)	/	(14)
Project Trips				1,934	104	33	/	71	130	77	/	53
Existing Trip Credit				(2209)	(57)	(36)	/	(21)	(152)	(73)	/	(79)
Total Project Trips				1934	104	33	/	71	130	77	/	53
Net New Project Trips				(275)	47	(3)	/	50	(22)	4	/	(26)

Notes:
1. Assume current retail is 85% occupied
2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

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Therefore, the CalEEMod model should not have included pass-by trips in the trip purpose percentages for the shopping center land use. By spreading the trip purpose percentages amongst the three categories, the model is accounting for pass-by trips that have already been accounted for in the DEIR's TA. Because the proposed Project's CalEEMod model incorrectly allocates the shopping center land use's trips to the various categories of trip purposes, the emissions associated with these trips are underestimated and as a result, the Project's mobile-source operational emissions are underestimated. An updated CalEEMod model must be prepared in order to accurately estimate the Project's operational emissions.

Unsubstantiated Application of Construction Mitigation Measures

Review of the CalEEMod output files demonstrates that the model included several unsubstantiated construction mitigation measures. As a result, the model may underestimate the Project's construction-related emissions.

B5-35

The Project's CalEEMod output files demonstrate that the model included a 6 percent reduction from "Clean Paved Roads" and a 12 percent moisture content for "Water Unpaved Roads" (see excerpt below) (Appendix C, pp. 40, 69, 94).

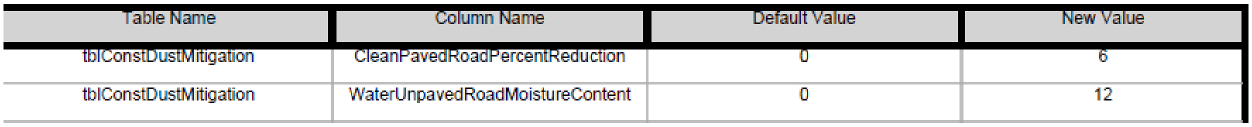
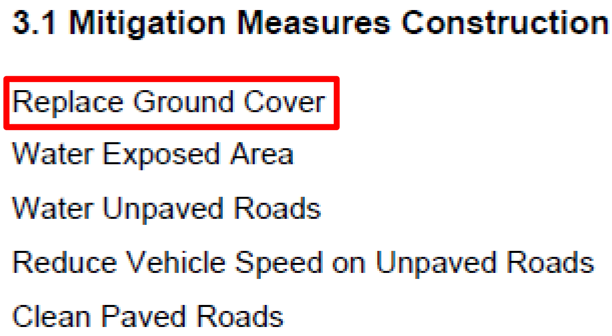


Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12

As you can see in the above excerpt, the mode included 6 percent reduction in construction dust based on "Clean Paved Roads" and a 12 percent moisture content based on "Water Unpaved Roads." Furthermore, the model included the "Replace Ground Cover" mitigation measure (see excerpt below) (Appendix C, pp. 45, 74, 99).

B-35
continued



3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

As you can see in the excerpt above, the "Replace Ground Cover" mitigation measure was included in the model. As previously stated, the CalEEMod User's Guide requires that any non-default values inputted must be justified.[6] According to the "User Entered Comments & NonDefault Data" table, the justification provided for these changes is: "Per BAAQMD basic control measures" (Appendix C, pp. 40, 69, 94). According to Mitigation Measure AQ-2 in the DEIR, the Project would prepare a Construction Management Plan (CMP) including the BAAQMD Basic Construction Mitigation Measures (p. 2-8, Table 2-2). However, none of these measures discusses the 6 percent or 12 percent reductions included in the model, and as a result, these reduction percentages cannot be verified. Furthermore, none of these measures address the replacement of ground cover, and as a result, the inclusion of this measure is unsubstantiated. Through the inclusion of unverified construction mitigation measures, the CalEEMod model may underestimate the Project's construction emissions and should not be relied upon to determine Project significance.

Unsubstantiated Application of Mobile Mitigation Measures

Review of the CalEEMod output files demonstrates that the model included several unsubstantiated mobile mitigation measures. As a result, the model may underestimate the Project's mobile-related operational emissions.

B5-36

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[6] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13.

The Project's CalEEMod output files demonstrates that the model included several mobile-related operational mitigation measures, including "Increase Density" and "Increase Diversity" (see excerpt below) (Appendix C, pp. 58, 86, 111).

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Improve Pedestrian Network

B5-36

As you can see in the excerpt above, the "Increase Density" and "Increase Diversity" mitigation measures were included in the model. As previously stated, the CalEEMod User's Guide requires that any non-default values inputted must be justified.[7] However, review of the "User Entered Comments & Non-Default Data" table demonstrates that no justification is provided for these measures. Furthermore, the DEIR fails to substantiate these mitigation measures. As a result, the implementation of these measures cannot be verified, and the model should not be relied upon to determine Project significance.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The DEIR conducts a construction health risk assessment (HRA) and determines that the construction-related health risk posed to the maximally exposed individual receptor (MEIR) would be approximately 2.23 in one million (Appendix C, p. 26). Specifically, regarding the Project's construction health risk, the DEIR states:

> "The highest calculated carcinogenic risk from project construction is 2.23 per million based on an annual PM_{10} concentration of 0.012 μg/m^3" (Appendix C, p. 26). B5-37

The DEIR goes on to conclude:

> "As described above, worst-case construction risk levels based on screening-level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds" (Appendix C, p. 26).

However, this analysis is incorrect. As discussed above, the construction HRA relies on a flawed CalEEMod model that incorrectly underestimates construction emissions. Thus, the health risk associated with the Project's construction may also be underestimated.

Regarding the Project's operational health risk, the DEIR states,

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[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13.

> “The highest calculated carcinogenic risk as a result of the project is 9.82 per million for 70-year exposure” (Appendix C, p. 27)

However, this analysis calculated the risk posed to future sensitive receptors *on the Project site* as a result of the Project’s close proximity to SR-85 (see excerpt below) (Appendix C, p. 28, Table 8).

B5-37
continued

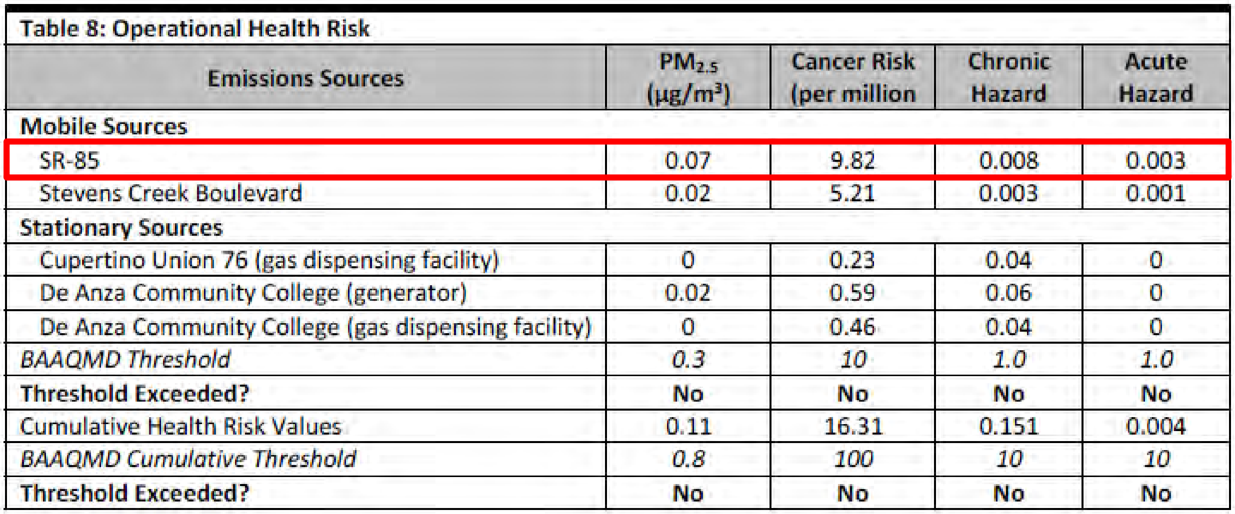

Table 8: Operational Health Risk

Emissions Sources	$PM_{2.5}$ (µg/m³)	Cancer Risk (per million	Chronic Hazard	Acute Hazard
Mobile Sources				
SR-85	0.07	9.82	0.008	0.003
Stevens Creek Boulevard	0.02	5.21	0.003	0.001
Stationary Sources				
Cupertino Union 76 (gas dispensing facility)	0	0.23	0.04	0
De Anza Community College (generator)	0.02	0.59	0.06	0
De Anza Community College (gas dispensing facility)	0	0.46	0.04	0
BAAQMD Threshold	*0.3*	*10*	*1.0*	*1.0*
Threshold Exceeded?	**No**	**No**	**No**	**No**
Cumulative Health Risk Values	0.11	16.31	0.151	0.004
BAAQMD Cumulative Threshold	*0.8*	*100*	*10*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Thus, the DEIR failed to conduct an HRA quantifying the risk posed to *nearby, existing* sensitive receptors as a result of the Project’s operation. By failing to prepare an operational HRA to nearby, existing sensitive receptors, the DEIR is inconsistent with recommendations set forth by the Office of Environmental Health and Hazard Assessment’s (OEHHA) most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was cited in the DEIR (Appendix C, p. 26).[8] This guidance document describes the types of projects that warrant the preparation of a health risk assessment.[9] Once construction of the Project is complete, the Project will operate for a long period of time. During operation, the Project will generate vehicle trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).[10] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, health risks from Project operation should have also been evaluated by the DEIR, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. These recommendations reflect the most recent health risk policy, and

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[8] “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[9] “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[10] “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-6, 8-15.

as such, an updated assessment of health risks posed to nearby sensitive receptors from Project operation should be included in a revised CEQA evaluation for the Project.

Finally, the DEIR fails to sum the cancer risk calculated for each age group. According to OEHHA guidance, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."[11] However, review of the construction HRA conducted in the DEIR demonstrates that, while each age bin was calculated, the DEIR failed to sum them to evaluate the total cancer risk over the course of the Project's lifetime, including both construction and operation. This is incorrect and thus, an updated analysis should quantify the Project's construction and operational health risks and then sum them to compare to the BAAQMD threshold of 10 in one million.[12]

B5-37 continued

Screening-Level Assessment Indicates Significant Impact

In an effort to demonstrate the potential health risk posed by Project construction and operation to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, provide substantial evidence that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact that was not previously identified.

In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model. [13] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[14] and the California Air Pollution Control Officers Associated (CAPCOA) [15] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

B5-38

We prepared a preliminary HRA of the Project's construction and operational health-related impact to sensitive receptors using the annual PM_{10} exhaust estimates from the SWAPE annual CalEEMod output files. According to the Air Quality Assessment, the closest residential receptor is located approximately 90 feet, or 27 meters, north of the Project site (p. 4.1-10, Table 4.1-5). Consistent with recommendations set forth by the 2015 OEHHA guidance cited in the DEIR, we assumed that residential exposure begins during the third trimester stage of life. The SWAPE construction CalEEMod output files indicate that construction activities will generate approximately 464 pounds of DPM over the approximately 730-day construction period. The AERSCREEN model relies on a continuous average

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[11] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4

[12] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

[13] "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

[14] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[15] "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{463.8\ lbs}{730\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.003336\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.003336 grams per second (g/s). Subtracting the 730-day construction duration from the total residential duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DPM for an additional 28 years. SWAPE's updated operational CalEEMod emissions indicate that operational activities will generate approximately 71 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

B5-38
continued

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{71.4\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.001027\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.00012 g/s. Construction and operational activity was simulated as an 8.1 -acre rectangular area source in AERSCREEN with dimensions of 264 meters by 124 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[16] As previously stated, there are residential receptors located approximately 25 meters from the Project boundary. However, the maximally exposed receptor, according to AERSCREEN, is located 125 meters from the Project site. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.953 $\mu g/m^3$ DPM at approximately 125 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3953 $\mu g/m^3$ for Project construction at the maximally exposed sensitive receptor. For Project operation, the single-hour concentration estimated by AERSCREEN is 1.217 $\mu g/m^3$ DPM at approximately 125 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.1217 $\mu g/m^3$ for Project operation at the maximally exposed sensitive receptor.

B5-39

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[16] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, *available at*: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; *see also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 4-36.

Consistent with the most recent OEHHA guidance, as cited by the DEIR, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution (Appendix C, p. 26).[17] According to the most updated guidance, quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). Furthermore, in accordance with the OEHHA guidance, we used the 95th percentile breathing rates for infants.[18] We used a cancer potency factor of 1.1 $(mg/kg\text{-}day)^{-1}$ and an averaging time of 25,550 days. OEHHA recommends that a 30-year exposure duration be used as the basis for estimating cancer risk at the MEIR.[19] Also consistent with OEHHA guidance, exposure to the MEIR was assumed to begin in the third trimester to provide the most conservative estimate of air quality hazards. Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 0.85 for the 3rd trimester and infant receptors, 0.72 for child receptors, and 0.73 for adult receptors.[20] The results of our calculations are shown below.

B5-39
continued

The Maximally Exposed Individual at a Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk
Construction	0.25	0.3953	361	10	4.6E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***4.6E-06***
Construction	1.75	0.3953	1090	10	9.7E-05
Operation	0.25	0.1217	1090	10	4.2E-06
Infant Exposure Duration	***2.00***			***Infant Exposure***	***1.0E-04***
Operation	14.00	0.1217	572	3	3.2E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***3.2E-05***
Operation	14.00	0.1217	261	1	4.9E-06
Adult Exposure Duration	***14.00***			***Adult Exposure***	***4.9E-06***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**1.4E-04**

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[17] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[18] "Air Toxics NSR Program Health Risk Assessment Guidelines." BAAQMD, December 2016, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, p. 3.
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[19] "Risk Assessment Guidelines Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015*, available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-6.

[20] "Air Toxics NSR Program Health Risk Assessment Guidelines." BAAQMD, December 2016, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, p. 4-5.

As indicated in the table above, the excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 25 meters away, over the course of Project construction and operation, are approximately 4.9, 32, 100, and 4.6 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor is approximately 140 in one million, thus resulting in a potentially significant health risk impact not previously addressed or identified by the DEIR.

B5-39 continued

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. [21] The purpose of the screening-level construction HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level construction HRA indicates a potentially significant impact, the City should prepare an EIR with a revised HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined health risk assessment which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR concludes that the Project's GHG impact would be less than significant based on the BAAQMD bright-line threshold of 1,100 MT CO_2e/year, stating:

> "The proposed project would not result in an increase in GHG emissions that exceed the BAAQMD's bright-line screening threshold of 1,100 $MTCO_2e$ per year" (4.5-17).

B5-40

Furthermore, the DEIR relies upon the Project's consistency with CARB's 2017 Scoping Plan, MTC/ABAG's Plan Bay Area 2040, and the Cupertino CAP (p. 4.5-17, 4.5-18, 4.5-19). However, this analysis and subsequent less than significant impact conclusion is incorrect for several reasons:

1. CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040 cannot be relied upon to determine Project significance;
2. The DEIR fails to demonstrate consistency with the Cupertino CAP;
3. The DEIR relies upon an outdated and inapplicable threshold; and
4. The DEIR's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;

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[21] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5

(1) CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040 are not Climate Action Plans (CAPs)

The DEIR determines that the Project demonstrates consistency with CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040. However, this does not qualify as Climate Action Plan (CAP). CEQA Guidelines § 15064.4(b)(3) allows a lead agency to consider "[t]he extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (*see, e.g., section 15183.5(b)*)" (Emph. added). When adopting this language, the California Natural Resources Agency ("Resources Agency") explained in its 2018 Final Statement of Reasons for Regulatory Action ("2018 Statement of Reason")[22] that it explicitly added referenced to section 15183.5(b) because it was "needed to clarify that lead agencies may rely on plans *prepared pursuant to section 15183.5* in evaluating a project's [GHG] emissions … [and] consistent with the Agency's Final Statement of Reasons for the addition of section 15064.4, which states that 'proposed section 15064.4 is intended to be *read in conjunction with . . . proposed section 15183.5*. Those sections each indicate that local and regional plans may be developed to reduce GHG emissions.'" 2018 Final Statement of Reason, p. 19 (emph. added); *see also* 2009 Final Statement of Reasons for Regulatory Action, p. 27.[23] When read in conjunction, CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear qualified GHG reduction plans (also commonly referred to as a Climate Action Plan ["CAP"]) should include the following features: B5-41

(1) **Inventory**: Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction);
(2) **Establish GHG Reduction Goal**: Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
(3) **Analyze Project Types**: Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
(4) **Craft Performance Based Mitigation Measures**: Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
(5) **Monitoring**: Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels;

The above-listed CAP features provide the necessary *substantial evidence demonstrating a project's incremental contribution is not cumulative considerable*, as required under CEQA Guidelines §

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[22] Resources Agency (Nov. 2018) Final Statement of Reasons For Regulatory Action: Amendments To The State CEQA Guidelines, http://resources.ca.gov/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf.

[23] Resources Agency (Dec. 2009) Final Statement of Reasons for Regulatory Action, p. 27 ("Those sections each indicate that local and regional plans may be developed to reduce GHG emissions. If such plans reduce community-wide emissions to a level that is less than significant, a later project that complies with the requirements in such a plan may be found to have a less than significant impact."), http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf.

15064.4(b)(3).[24] Here, however, the DEIR fails to demonstrate that the CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040 include the above-listed requirements to be considered a qualified CAPs for the City. As such, the DEIR leaves an analytical gap showing that compliance with said plans can be used for a project-level significance determination. Thus, the DEIR's GHG analysis regarding the CARB's 2017 Scoping Plan and MTC/ABAG's Plan Bay Area 2040 should not be relied upon to determine Project significance. B5-41 continued

(2) The DEIR Fails to Demonstrate Consistency with the Cupertino CAP

As discussed above, the DEIR relies upon the Project's consistency with the Cupertino CAP to determine that the Project's GHG impact would be less than significant. Specifically, the DEIR states,

> "As an infill redevelopment priority housing development on a designated PDA and TPA the proposed project would be consistent with the *overall intent* of the CAP to support reductions in GHG emissions and the proposed project would not conflict any goals or measures to reduce GHG emissions in the CAP and impacts would be *less than significant*" (emphasis added) (p. 4.5-19). B5-42

However, while the DEIR describes how the Project would be consistent with the "overall intent" of the Cupertino CAP by not conflicting with several community-wide measures, the DEIR fails to address consistency with *all* community-wide measures listed in the CAP (p. 4.5-19). In addition, the CAP fails to provide specific, project-level measures. Specifically, the DEIR lists several measures from the Cupertino CAP to demonstrate compliance, however, review of the Cupertino CAP reveals that these measures are "community-wide reduction measures."[25] Thus, the DEIR incorrectly relies on "community-wide" measures, rather than specific project-level measures, to determine compliance with the CAP.

Notwithstanding the DEIR's reliance on inapplicable "community-wide" measures, the DEIR fails to demonstrate consistency with all of the CAP's "community-wide" measures (see table below).

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[24] *See Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 200-201 (Upheld qualitative GHG analysis when based on city's adopted its greenhouse gas strategy that contained "multiple elements" of CEQA Guidelines § 15183.5(b), "quantification of [city's] baseline levels of [GHG] emissions and planned reductions[,]" approved by the regional air district, and "[a]t the heart" of the city's greenhouse gas strategy was "specific regulations" and measures to be implemented on a "project-by-project basis … designed to achieve the specified citywide emission level.").

[25] " Climate Action Plan." City of Cupertino, January 2015, *available at:* https://www.cupertino.org/home/showdocument?id=9605, p. 68.

Measure	DEIR Consistency
Cupertino CAP	
Community-Wide Measures	
Measure C-E-1 Energy Use Data and Analysis *Increase resident and building owner/tenant/operator knowledge about how, when, and where building energy is used.* *2035 GHG Reduction Potential: 850 MT CO_2e/yr*	Here, the DEIR fails to mention how the Project would increase resident and building owner/tenant/operator knowledge about how, when, and where building energy is used.
Measure C-E-2 Retrofit Financing *Promote existing and support development of new private financing options for home and commercial building retrofits and renewable energy development.* *2035 GHG Reduction Potential: 10,525 MT CO_2e/yr*	Here, the DEIR fails to mention how the Project would promote existing and support development of new private financing options for home and commercial building retrofits and renewable energy development.
Measure C-E-3 Home & Commercial Building Retrofit Outreach *Develop aggressive outreach program to drive voluntary participation in energy- and water-efficiency retrofits.* *Supporting Measure*	Here, the DEIR fails to mention how the Project would Develop aggressive outreach program to drive voluntary participation in energy- and water-efficiency retrofits.
Measure C-E-4 Energy Assurance & Resiliency Plan *Develop a long-term community-wide energy conservation plan that considers future opportunities to influence building energy efficiency through additional or enhanced building regulations.*	Here, the DEIR fails to mention how the Project would develop a long-term community-wide energy conservation plan that considers future opportunities to influence building energy efficiency through additional or enhanced building regulations.

B5-42
continued

Supporting Measure	
Measure C-E-5 Community-Wide Solar Photovoltaic Development *Encourage voluntary community-wide solar photovoltaic development through regulatory barrier reduction and public outreach campaigns.* *2035 GHG Reduction Potential: 4,400 MT* CO_2*e/yr*	Here, the DEIR states that "[t]he proposed buildings would comply with Title 24 solar requirements and would meet solar ready standards. While the requirements under Title 24 do not require installation of solar-energy systems, buildings are required to be built to accept the installation of such a system" (p. 4.5-19). However, the DEIR fails to demonstrate how the Project would encourage voluntary community-wide solar photovoltaic development through regulatory barrier reduction and public outreach campaigns. Furthermore, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.
Measure C-E-6 Community-Wide Solar Hot Water Development *Encourage communitywide solar hot water development through regulatory barrier reduction and public outreach campaigns.* *2035 GHG Reduction Potential: 925 MT* CO_2*e/yr*	Here, the DEIR fails to mention how the Project would encourage communitywide solar hot water development through regulatory barrier reduction and public outreach campaigns. In addition, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.
Measure C-E-7 Community Choice Energy Option *Partner with other Santa Clara County jurisdictions to evaluate the development of a regional CCE option, including identification of the geographic scope, potential costs to participating jurisdictions and residents, and potential liabilities.* *2035 GHG Reduction Potential: 56,875 MT* CO_2*e/yr*	Here, the DEIR fails to mention how the Project would partner with other Santa Clara County jurisdictions to evaluate the development of a regional CCE option, including identification of the geographic scope, potential costs to participating jurisdictions and residents, and potential liabilities. In addition, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.

B5-42
continued

Measure C-T-2 Bikeshare Program *Explore feasibility of developing local bikeshare program.* *Supporting Measure*	Here, the DEIR fails to mention how the Project would explore feasibility of developing local bikeshare program.
Measure C-T-3 Transportation Demand Management *Provide informational resources to local businesses subject to SB 1339 transportation demand management program requirements and encourage additional voluntary participation in the program.* *2035 GHG Reduction Potential: 2,375 MT CO_2e/yr*	Here, the DEIR fails to mention how the Project would provide informational resources to local businesses subject to SB 1339 transportation demand management program requirements and encourage additional voluntary participation in the program. In addition, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.
Measure C-T-4 Transit Route Expansion *Explore options to develop local community shuttle or community-wide car sharing to fill gaps in existing transit network.* *Supporting Measure*	Here, the DEIR fails to mention how the Project would explore options to develop local community shuttle or community-wide car sharing to fill gaps in existing transit network.
Measure C-T-5 Transit Priority *Improve transit service reliability and speed.* *Supporting Measure*	Here, the DEIR fails to mention how the Project would improve transit service reliability and speed.
Measure C-T-6 Transit-Oriented Development *Continue to encourage development that takes advantage of its location near local transit options (e.g., major bus stops) through higher densities and intensities to increase ridership potential.* *Supporting Measure*	Here, the DEIR states, "As an infill project on a currently developed site within a designated PDA and TPA (CAP Measure C-T-6, Transit-Oriented Development), the proposed project would support efforts to reduce GHG emissions from VMT (CAP Goal 1, Reduce Energy Use)" (4.5-19). However, this fails to specifically demonstrate how the Project would encourage development that takes advantage of its location near local transit options (e.g., major bus stops) through higher densities and intensities to increase ridership potential. As a result, we cannot

B5-42
continued

	verify whether the Project would be consistent with Measure C-T-6.
Measure C-T-7 Community-Wide Alternative Fuel Vehicles *Encourage community-wide use of alternative fuel vehicles through expansion of alternative vehicle refueling infrastructure.* *2035 GHG Reduction Potential: 10,225 MT CO_2e/yr*	Here, the DEIR states that the Project would "install Electric Vehicle Supply Equipment for the charging of electric vehicles" (4.5-19). However, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.
Measure C-W-1 Recycled Water Irrigation Program *Explore opportunities to use recycled water for irrigation purposes to reduce potable water demands.* *Supporting Measure*	Although the DEIR discusses best management practices for water conservation to achieve the City's water conservation goals, the DEIR fails to address recycled water irrigation (p. 4.5-19).
Measure C-SW-1 Zero Waste Goal *Maximize solid waste diversion community-wide through preparation of a zero-waste strategic plan.* *Supporting Measure*	Here, the DEIR fails to mention how the Project would maximize solid waste diversion community-wide through preparation of a zero-waste strategic plan.
Measure C-SW-2 Food Scrap and Compostable Paper Diversion *Continue to promote the collection of food scraps and compostable paper through the City's organics collection program.* *2035 GHG Reduction Potential: 750 MT CO_2e/yr*	Here, the DEIR fails to mention how the Project would continue to promote the collection of food scraps and compostable paper through the City's organics collection program. In addition, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.

B5-42
continued

Measure C-SW-3 Construction & Demolition Waste Diversion Program *Continue to enforce diversion requirements in City's Construction & Demolition Debris Diversion and Green Building Ordinances.* *2035 GHG Reduction Potential: 550 MT CO_2e/yr*	Here, while the DEIR discusses construction and demolition waste diversion, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.
Measure C-G-1 Urban Forest Program *Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.* *2035 GHG Reduction Potential: 725 MT CO_2e/yr*	Here, the DEIR fails to mention how the Project would support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership. In addition, the DEIR fails to quantify reductions or indicate that the Project will be able to achieve the 2035 GHG Reduction Potential as indicated in the CAP.

B5-42 continued

As you can see in the table above, the DEIR fails to provide sufficient information and analysis, or reconcile Project inconsistencies with various measures under the Cupertino CAP. As a result, we cannot verify that the Project would be fully consistent with the Cupertino CAP, and Project's GHG analysis should be relied upon to determine Project significance.

(3) The DEIR Relies Upon an Outdated and Inapplicable Threshold

In an effort to evaluate Project emissions, the DEIR includes a quantification of the Project's estimated emissions and compares them to the BAAQMD's bright-line screening threshold of 1,100 metric tons of CO_2 equivalents per year (MT CO_2e/year). Based on this evaluation, the DEIR concludes that Project's net GHG emissions would be approximately 359 MT CO_2e, which would not exceed the BAAQMD's bright-line screening threshold. The DEIR thus concludes that "project related GHG emissions would be *less than significant*" (p. 4.5-17) (see excerpt below) (p. 4.5-17, Table 4.5-6). B5-43

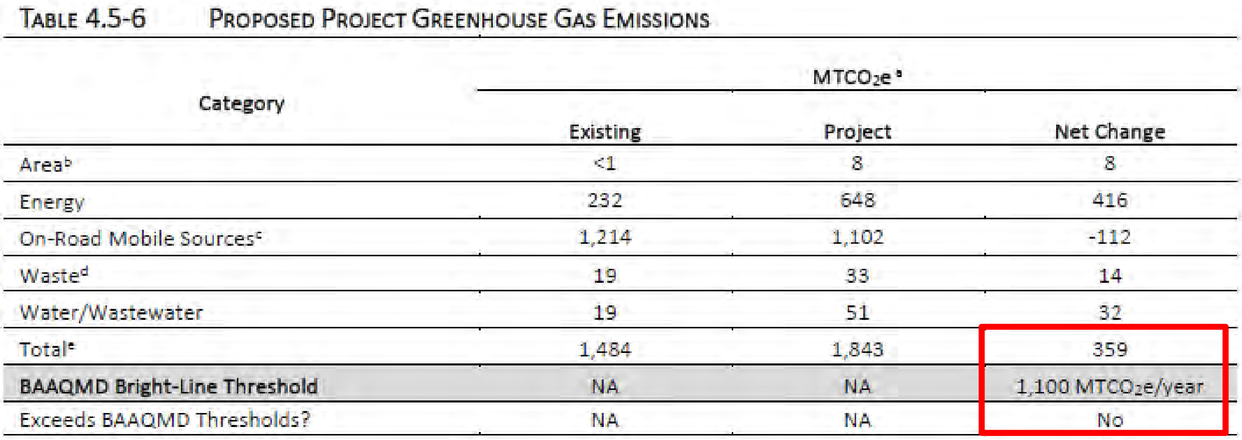

TABLE 4.5-6 PROPOSED PROJECT GREENHOUSE GAS EMISSIONS

Category	MTCO$_2$e[a]		
	Existing	Project	Net Change
Area[b]	<1	8	8
Energy	232	648	416
On-Road Mobile Sources[c]	1,214	1,102	-112
Waste[d]	19	33	14
Water/Wastewater	19	51	32
Total[e]	1,484	1,843	359
BAAQMD Bright-Line Threshold	NA	NA	1,100 MTCO$_2$e/year
Exceeds BAAQMD Thresholds?	NA	NA	No

As the above excerpt demonstrates, the DEIR compared the Project's quantified GHG emissions to the BAAQMD's bright-line screening threshold of 1,100 MT CO_2e/year. However, the DEIR's use of this threshold is incorrect, as the threshold was developed for the air district's planned reductions for 2020, and thus, only applies to projects that will be operational by 2020.[26] According to the DEIR, "[c]onstruction of the proposed project would occur in two phases over a 16-month period and is anticipated to be completed by the year 2023" (p. 3-27). As such, the BAAQMD's bright-line screening threshold for 2020 would not apply to the proposed Project, which is not anticipated to become operational until 2023. B5-43 continued

(4) The DEIR's GHG Analysis Relies Upon an Incorrect and Unsubstantiated Air Model

In addition to the DEIR's inability to rely on various plans and policies to demonstrate less than significant GHG impacts, the DEIR utilizes an incorrect CalEEMod to analysis the Project's GHG impact. As discussed above, the DEIR's CalEEMod model relies upon incorrect input parameters to estimate the Project's criteria air pollutant and GHG emissions, resulting in an underestimation of Project emissions. Therefore, we find the DEIR's quantitative GHG analysis to be incorrect and unreliable. An updated EIR should be prepared, using correct, project-specific modeling to adequately assess and mitigate the Project's GHG impact. B5-44

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties. B5-45

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul Rosenfeld

Paul E. Rosenfeld, Ph.D.

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[26] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. D-20.

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Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

B5-46

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

B5-46
continued

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

B5-46
continued

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.
- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

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With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

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continued

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

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Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

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Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

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Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on VOC filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld is the Co-Founder and Principal Environmental Chemist at Soil Water Air Protection Enterprise (SWAPE). His focus is the fate and transport of environmental contaminants, risk assessment, and ecological restoration. His project experience ranges from monitoring and modeling of pollution sources as they relate to human and ecological health. Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing, petroleum, MtBE and fuel oxygenates, chlorinated solvents, pesticides, radioactive waste, PCBs, PAHs, dioxins, furans, volatile organics, semi-volatile organics, perchlorate, heavy metals, asbestos, PFOA, unusual polymers, and odor. Significant projects performed by Dr. Rosenfeld include the following:

Litigation Support

Client: Missouri Department of Natural Resources (Jefferson City, Missouri)
Serving as an expert in evaluating air pollution and odor emissions from a Republic Landfill in St. Louis, Missouri. Conducted. Project manager overseeing daily, weekly and comprehensive sampling of odor and chemicals.

Client: Louisiana Department of Transportation and Development (Baton Rouge, Louisiana)
Serving as an expert witness, conducting groundwater modeling of an ethylene dichloride DNAPL and soluble plume resulting from spill caused by Conoco Phillips.

Client: Missouri Department of Natural Resources (St. Louis, Missouri)
Serving as a consulting expert and potential testifying expert regarding a landfill fire directly adjacent to another landfill containing radioactive waste. Implemented an air monitoring program testing for over 100 different compounds using approximately 12 different analytical methods.

Client: Baron & Budd, P.C. (Dallas, Texas) and Weitz & Luxeinberg (New York, New York)
Served as a consulting expert in MTBE Federal Multi District Litigation (MDL) in New York. Consolidated ground water data, created maps for test cases, constructed damage model, evaluated taste and odor threshold levels. Resulted in a settlement of over $440 million.

Client: The Buzbee Law Firm (Houston, Texas)
Served as a as an expert in ongoing litigation involving over 50,000+ plaintiffs who are seeking compensation for chemical exposure and reduction in property value resulting from chemicals released from the BP facility.

Client: Environmental Litigation Group (Birmingham, Alabama)
Serving as an expert on property damage, medical monitoring and toxic tort claims that have been filed on behalf of over 13,000 plaintiffs who were exposed to PCBs and dioxins/furans resulting from emissions from Monsanto and Cerro Copper's operations in Sauget, Illinois. Developed AERMOD models to demonstrate plaintiff's exposure.

Client: Baron & Budd P.C. (Dallas Texas) and Korein Tillery (St. Louis, Missouri)
Served as a consulting expert for a Class Action defective product claim filed in Madison County, Illinois against Syngenta and five other manufacturers for atrazine. Evaluated health issues associated with atrazine and deterimied treatment cost for filtration of public drinking water supplies. Resulted in $105 million dollar settlement.

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Client: The Buzbee Law Firm (Houston, Texas)
Served as a consulting expert in catalyst release and refinery emissions cases against the BP Refinery in Texas City. A jury verdict for 10 employees exposed to catalyst via BP's irresponsible behavior.

Client: Baron & Budd, P.C. (Dallas, Texas)
Served as a consulting expert to calculate the Maximum Allowable Dose Level (MADL) and No Significant Risk Level (NSRL), based on Cal EPA and OEHHA guidelines, for Polychlorinated Biphenyls (PCBs) in fish oil dietary supplements.

Client: Girardi Keese (Los Angeles, California)
Served as an expert testifying on hydrocarbon exposure of a woman who worked on a fuel barge operated by Chevron. Demonstrated that the plaintiff was exposed to excessive amounts of benzene.

Client: Mason & Cawood (Annapolis, Maryland) and Girardi & Keese (Los Angeles, California)
Serving as an expert consultant on the Battlefield Golf Club fly ash disposal site in Chesapeake, VA, where arsenic, other metals and radionuclides are leaching into groundwater, and ash is blowing off-site onto the surrounding communities.

Client: California Earth Mineral Corporation (Culver City, California)
Evaluating the montmorillonite clay deposit located near El Centro, California. Working as a Defense Expert representing an individual who owns a 2,500 acre parcel that will potentially be seized by the United States Navy via eminent domain.

Client: Matthews & Associates (Houston, Texas)
Serving as an expert witness, preparing air model demonstrating residential exposure via emissions from fracking in natural gas wells in Duncan, Texas.

Client: Baron & Budd P.C. (Dallas, Texas) and Korein Tillery (St. Louis, Missouri)
Served as a consulting expert for analysis of private wells relating to litigation regarding compensation of private well owners for MTBE testing. Coordinated data acquisition and GIS analysis evaluating private well proximity to leaking underground storage tanks.

Client: Lurie & Park LLP (Los Angeles, California)
Served as an expert witness evaluating a vapor intrusion toxic tort case that resulted in a settlement. The Superfund site is a 4 ½ mile groundwater plume of chlorinated solvents in Whittier, California.

Client: Mason & Cawood (Annapolis, Maryland)
Evaluated data from the Hess Gasoline Station in northern Baltimore, Maryland that had a release resulting in flooding of plaintiff's homes with gasoline-contaminated water, foul odor, and biofilm growth.

Client: The Buzbee Law Firm (Houston, Texas)
Evaluated air quality resulting from grain processing emissions in Muscatine, Iowa.

Client: Anderson Kill & Olick, P.C. (Ventura, California)
Evaluated historical exposure and lateral and vertical extent of contamination resulting from a ~150 million gallon Exxon Mobil tank farm located near Watts, California.

Client: Packard Law Firm (Petaluma, California)
Served as an expert witness, evaluated lead in Proposition 65 Case where various products were found to have elevated lead levels.

Client: The Buzbee Law Firm (Houston, Texas)
Evaluated data resulting from an oil spill in Port Arthur, Texas.

Client: Nexsen Pruet, LLC (Charleston, South Carolina)
Serving as expert in chlorine exposure in a railroad tank car accident where approximately 120,000 pounds of chlorine were released.

Client: Girardi & Keese (Los Angeles, California)
Serving as an expert investigating hydrocarbon exposure and property damage for ~600 individuals and ~280 properties in Carson, California where homes were constructed above a large tank farm formerly owned by Shell.

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Client: Brent Coon Law Firm (Cleveland, Ohio)
Served as an expert, calculating an environmental exposure to benzene, PAHs, and VOCs from a Chevron Refinery in Hooven, Ohio. Conducted AERMOD modeling to determine cumulative dose.

Client: Lundy Davis (Lake Charles, Louisiana)
Served as consulting expert on an oil field case representing the lease holder of a contaminated oil field. Conducted field work evaluating oil field contamination in Sulphur, Louisiana. Property is owned by Conoco Phillips, but leased by Yellow Rock, a small oil firm.

Client: Cox Cox Filo (Lake Charles, Louisiana)
Served as testifying expert on a multimillion gallon oil spill in Lake Charles which occurred on June 19, 2006, resulting in hydrocarbon vapor exposure to hundreds of workers and residents. Prepared air model and calculated exposure concentration. Demonstrated that petroleum odor alone can result in significant health harms.

Client: Cotchett Pitre & McCarthy (San Francisco, California)
Served as testifying expert representing homeowners who unknowingly purchased homes built on an old oil field in Santa Maria, California. Properties have high concentrations of petroleum hydrocarbons in subsurface soils resulting in diminished property value.

Client: Law Offices Of Anthony Liberatore P.C. (Los Angeles, California)
Served as testifying expert representing individuals who rented homes on the Inglewood Oil Field in California. Plaintiffs were exposed to hydrocarbon contaminated water and air, and experienced health harms associated with the petroleum exposure.

Client: Orange County District Attorney (Orange County, California)
Coordinated a review of 143 ARCO gas stations in Orange County to assist the District Attorney's prosecution of CCR Title 23 and California Health and Safety Code violators.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as a testifying expert in a health effects case against ABC Coke/Drummond Company for polluting a community with PAHs, benzene, particulate matter, heavy metals, and coke oven emissions. Created air dispersion models and conducted attic dust sampling, exposure modeling, and risk assessment for plaintiffs.

Client: Masry & Vitatoe (Westlake Village, California), Engstrom Lipscomb Lack (Los Angeles, Califronia) and Baron & Budd P.C. (Dallas, Texas)
Served as a consulting expert in Proposition 65 lawsuit filed against major oil companies for benzene and toluene releases from gas stations and refineries resulting in contaminated groundwater. Settlement included over $110 million dollars in injunctive relief.

Client: Tommy Franks Law Firm (Austin, Texas)
Served as expert evaluating groundwater contamination which resulted from the hazardous waste injection program and negligent actions of Morton Thiokol and Rohm Hass. Evaluated drinking water contamination and community exposure.

Client: Baron & Budd P.C. (Dallas, Texas) and Sher Leff (San Francisco, California)
Served as consulting expert for several California cities that filed defective product cases against Dow Chemical and Shell for 1,2,3-trichloropropane groundwater contamination. Generated maps showing capture zones of impacted wells for various municipalities.

Client: Weitz & Luxenberg (New York, New York)
Served as expert on Property Damage and Nuisance claims resulting from emissions from the Countywide Landfill in Ohio. The landfill had an exothermic reaction or fire resulting from aluminum dross dumping, and the EPA fined the landfill $10,000,000 dollars.

Client: Baron & Budd P.C. (Dallas, Texas)
Served as a consulting expert for a groundwater contamination case in Pensacola, Florida where fluorinated compounds contaminated wells operated by Escambia County.

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Client: Environmental Litigation Group (Birmingham, Alabama)
Served as an expert on groundwater case where Exxon Mobil and Helena Chemical released ethylene dichloride into groundwater resulting in a large plume. Prepared report on the appropriate treatment technology and cost, and flaws with the proposed on-site remediation.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as an expert on air emissions released when a Bartlo Packaging Incorporated facility in West Helena, Arkansas exploded resulting in community exposure to pesticides and smoke from combustion of pesticides.

Client: Omara & Padilla (San Diego, California)
Served as a testifying expert on nuisance case against Nutro Dogfood Company that constructed a large dog food processing facility in the middle of a residential community in Victorville, California with no odor control devices. The facility has undergone significant modifications, including installation of a regenerative thermal oxidizer.

Client: Environmental Litigation Group (Birmingham, Alabama)
Serving as an expert on property damage and medical monitoring claims that have been filed against International Paper resulting from chemical emissions from facilities located in Bastrop, Louisiana; Prattville, Alabama; and Georgetown, South Carolina.

Client: Estep and Shafer L.C. (Kingwood, West Virginia)
Served as expert calculating acid emissions doses to residents resulting from coal-fired power plant emissions in West Virginia using various air models.

Client: Watts Law Firm (Austin, Texas), Woodfill & Pressler (Houston, Texas) and Woska & Associates (Oklahoma City, Oklahoma)
Served as testifying expert on community and worker exposure to CCA, creosote, PAHs, and dioxins/furans from a BNSF and Koppers Facility in Somerville, Texas. Conducted field sampling, risk assessment, dose assessment and air modeling to quantify exposure to workers and community members.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as expert regarding community exposure to CCA, creosote, PAHs, and dioxins/furans from a Louisiana Pacific wood treatment facility in Florala, Alabama. Conducted blood sampling and environmental sampling to determine environmental exposure to dioxins/furans and PAHs.

Client: Sanders Law Firm (Colorado Springs, Colorado) and Vamvoras & Schwartzberg (Lake Charles, Louisiana)
Served as an expert calculating chemical exposure to over 500 workers from large ethylene dichloride spill in Lake Charles, Louisiana at the Conoco Phillips Refinery.

Client: Baron & Budd P.C. (Dallas, Texas)
Served as consulting expert in a defective product lawsuit against Dow Agroscience focusing on Clopyralid, a recalcitrant herbicide that damaged numerous compost facilities across the United States.

Client: Sullivan Papain Block McGrath & Cannavo (New York, New York) and The Cochran Firm (Dothan, Mississippi)

Served as an expert regarding community exposure to metals, PAHs PCBs, and dioxins/furans from the burning of Ford paint sludge and municipal solid waste in Ringwood, New Jersey.

Client: Rose, Klein & Marias LLP (Los Angeles, California)
Served as an expert in 55 Proposition 65 cases against individual facilities in the Port of Los Angeles and Port of Long Beach. Prepared air dispersion and risk models to demonstrate that each facility emits diesel particulate matter that results in risks exceeding 1/100,000, hence violating the Proposition 65 Statute.

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continued

Client: Rose, Klein & Marias LLP (Los Angeles, California) and Environmental Law Foundation (San Francisco, California)
Served as an expert in a Proposition 65 case against potato chip manufacturers. Conducted an analysis of several brands of potato chips for acrylamide concentrations and found that all samples exceeded Proposition 65 No Significant Risk Levels.

Client: Gonzales & Robinson (Westlake Village, California)
Served as a testifying expert in a toxic tort case against Chevron (Ortho) for allowing a community to be contaminated with lead arsenate pesticide. Created air dispersion and soil vadose zone transport models, and evaluated bioaccumulation of lead arsenate in food.

Client: Environment Now (Santa Monica, California)
Served as expert for Environment Now to convince the State of California to file a nuisance claim against automobile manufactures to recover MediCal damages from expenditures on asthma-related health care costs.

Client: Trutanich Michell (Long Beach, California)
Served as expert representing San Pedro Boat Works in the Port of Los Angeles. Prepared air dispersion, particulate air dispersion, and storm water discharge models to demonstrate that Kaiser Bulk Loading is responsible for copper concentrate accumulating in the bay sediment.

Client: Azurix of North America (Fort Myers, Florida)
Provided expert opinions, reports and research pertaining to a proposed County Ordinance requiring biosolids applicators to measure VOC and odor concentrations at application sites' boundaries.

Client: MCP Polyurethane (Pittsburg, Kansas)
Provided expert opinions and reports regarding metal-laden landfill runoff that damaged a running track by causing the reversion of the polyurethane due to its catalytic properties.

Risk Assessment And Air Modeling

Client: Hager, Dewick & Zuengler, S.C. (Green Bay, Wisconsin)
Conducted odor audit of rendering facility in Green Bay, Wisconsin.

Client: ABT-Haskell (San Bernardino, California)
Prepared air dispersion model for a proposed state-of-the-art enclosed compost facility. Prepared a traffic analysis and developed odor detection limits to predict 1, 8, and 24-hour off-site concentrations of sulfur, ammonia, and amine.

Client: Jefferson PRP Group (Los Angeles, California)
Evaluated exposure pathways for chlorinated solvents and hexavalent chromium for human health risk assessment of Los Angeles Academy (formerly Jefferson New Middle School) operated by Los Angeles Unified School District.

Client: Covanta (Susanville, California)
Prepared human health risk assessment for Covanta Energy focusing on agricultural worker exposure to caustic fertilizer.

Client: CIWMB (Sacramento, California)
Used dispersion models to estimate traveling distance and VOC concentrations downwind from a composting facility for the California Integrated Waste Management Board.

Client: Carboquimeca (Bogotá, Columbia)
Evaluated exposure pathways for human health risk assessment for a confidential client focusing on significant concentrations of arsenic and chlorinated solvents present in groundwater used for drinking water.

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Client: Navy Base Realignment and Closure Team (Treasure Island, California)
Used Johnson-Ettinger model to estimate indoor air PCB concentrations and compared estimated values with empirical data collected in homes.

Client: San Diego State University (San Diego, California)
Measured CO_2 flux from soils amended with different quantities of biosolids compost at Camp Pendleton to determine CO_2 credit values for coastal sage under fertilized and non-fertilized conditions.

Client: Navy Base Realignment and Closure Team (MCAS Tustin, California)
Evaluated cumulative risk of a multiple pathway scenario for a child resident and a construction worker. Evaluated exposure to air and soil via particulate and vapor inhalation, incidental soil ingestion, and dermal contact with soil.

Client: MCAS Miramar (San Diego, California)
Evaluated exposure pathways of metals in soil by comparing site data to background data. Risk assessment incorporated multiple pathway scenarios assuming child resident and construction worker particulate and vapor inhalation, soil ingestion, and dermal soil contact.

Client: Naval Weapons Station (Seal Beach, California)
Used a multiple pathway model to generate dust emission factors from automobiles driving on dirt roads. Calculated bioaccumulation of metals, PCBs, dioxin congeners and pesticides to estimate human and ecological risk.

Client: King County, Douglas County (Washington State)
Measured PM_{10} and $PM_{2.5}$ emissions from windblown soil treated with biosolids and a polyacrylamide polymer in Douglas County, Washington. Used Pilat Mark V impactor for measurement and compared data to EPA particulate regulations.

Client: King County (Seattle, Washington)
Created emission inventory for several compost and wastewater facilities comparing VOC, particulate, and fungi concentrations to NIOSH values estimating risk to workers and individuals at neighboring facilities.

Air Pollution Investigation and Remediation

Client: Republic Landfill (Santa Clarita, California)
Managed a field investigation of odor around a landfill during 30+ events. Used hedonic tone, butanol scale, dilution-to-threshold values, and odor character to evaluate odor sources and character and intensity.

Client: California Biomass (Victorville, California)
Managed a field investigation of odor around landfill during 9+ events. Used hedonic tone, butanol scale, dilution-to-threshold values, and odor character to evaluate odor sources, character and intensity.

Client: ABT-Haskell (Redlands, California)
Assisted in permitting a compost facility that will be completely enclosed with a complex scrubbing system using acid scrubbers, base scrubbers, biofilters, heat exchangers and chlorine to reduce VOC emissions by 99 percent.

Client: Synagro (Corona, California)
Designed and monitored 30-foot by 20-foot by 6-foot biofilter for VOC control at an industrial composting facility in Corona, California to reduce VOC emissions by 99 percent.

Client: Jeff Gage (Tacoma, Washington)
Conducted emission inventory at industrial compost facility using GC/MS analyses for VOCs. Evaluated effectiveness of VOC and odor control systems and estimated human health risk.

Client: Daishowa America (Port Angeles Mill, Washington)
Analyzed industrial paper sludge and ash for VOCs, heavy metals and nutrients to develop a land application program. Metals were compared to federal guidelines to determine maximum allowable land application rates.

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continued

Client: Jeff Gage (Puyallup, Washington)
Measured effectiveness of biofilters at composting facility and conducted EPA dispersion models to estimate traveling distance of odor and human health risk from exposure to volatile organics.

Surface Water, Groundwater, and Wastewater Investigation/Remediation

Client: Confidential (Downey, California)
Managed groundwater investigation to determine horizontal extent of 1,000 foot TCE plume associated with a metal finishing shop.

Client: Confidential (West Hollywood, California)
Designing soil vapor extraction system that is currently being installed for confidential client. Managing groundwater investigation to determine horizontal extent of TCE plume associated with dry cleaning.

Client: Synagro Technologies (Sacramento, California)
Managed groundwater investigation to determine if biosolids application impacted salinity and nutrient concentrations in groundwater.

Client: Navy Base Realignment and Closure Team (Treasure Island, California)
Assisted in the design and remediation of PCB, chlorinated solvent, hydrocarbon and lead contaminated groundwater and soil on Treasure Island. Negotiated screening levels with DTSC and Water Board. Assisted in the preparation of FSP/QAPP, RI/FS, and RAP documents and assisted in CEQA document preparation.

Client: Navy Base Realignment and Closure Team (MCAS Tustin, California)
Assisted in the design of groundwater monitoring systems for chlorinated solvents at Tustin MCAS. Contributed to the preparation of FS for groundwater treatment.

Client: Mission Cleaning Facility (Salinas, California)
Prepared a RAP and cost estimate for using an oxygen releasing compound (ORC) and molasses to oxidize diesel fuel in soil and groundwater at Mission Cleaning in Salinas.

Client: King County (Washington)
Established and monitored experimental plots at a US EPA Superfund Site in wetland and upland mine tailings contaminated with zinc and lead in Smelterville, Idaho. Used organic matter and pH adjustment for wetland remediation and erosion control.

Client: City of Redmond (Richmond, Washington)
Collected storm water from compost-amended and fertilized turf to measure nutrients in urban runoff. Evaluated effectiveness of organic matter-lined detention ponds on reduction of peak flow during storm events. Drafted compost amended landscape installation guidelines to promote storm water detention and nutrient runoff reduction.

Client: City of Seattle (Seattle, Washington)
Measured VOC emissions from Renton wastewater treatment plant in Washington. Ran GC/MS, dispersion models, and sensory panels to characterize, quantify, control and estimate risk from VOCs.

Client: Plumas County (Quincy, California)

Installed wetland to treat contaminated water containing 1% copper in an EPA Superfund site. Revegetated 10 acres of acidic and metal laden sand dunes resulting from hydraulic mining. Installed and monitored piezometers in wetland estimating metal loading.

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Client: Adams Egg Farm (St. Kitts, West Indies)
Designed, constructed, and maintained 3 anaerobic digesters at Springfield Egg Farm, St. Kitts. Digesters treated chicken excrement before effluent discharged into sea. Chicken waste was converted into methane cooking gas.

Client: BLM (Kremmling, Colorado)
Collected water samples for monitoring program along upper stretch of the Colorado River. Rafted along river and protected water quality by digging and repairing latrines.

Soil Science and Restoration Projects

Client: Hefner, Stark & Marois, LLP (Sacramento, California)
Facilitated in assisting Hefner, Stark & Marois, LLP in working with the Regional Water Quality board to determine how to utilize Calcium Participate as a by-product of processing sugar beets.

Client: Kinder Morgan (San Diego County, California)
Designed and monitored the restoration of a 110-acre project on Camp Pendleton along a 26-mile pipeline. Managed crew of 20, planting coastal sage, riparian, wetland, native grassland, and marsh ecosystems. Negotiated with the CDFW concerning species planting list and success standards.

Client: NAVY BRAC (Orote Landfill, Guam)
Designed and monitored pilot landfill cap mimicking limestone forest. Measured different species' root-penetration into landfill cap. Plants were used to evapotranspirate water, reducing water leaching through soil profile.

Client: LA Sanitation District Puente Hills Landfill (Whittier, California)
Monitored success of upland and wetland mitigation at Puente Hills Landfill operated by Sanitation Districts of Los Angeles. Negotiated with the Army Corps of Engineers and CDFG to obtain an early sign-off.

Client: City of Escondido (Escondido, California)
Designed, managed, installed, and monitored a 20-acre coastal sage scrub restoration project at Kit Carson Park, Escondido, California.

Client: Home Depot (Encinitas, California)
Designed, managed, installed and monitored a 15-acre coastal sage scrub and wetland restoration project at Home Depot in Encinitas, California.

Client: Alvarado Water Filtration Plant (San Diego, California)
Planned, installed and monitored 2-acre riparian and coastal sage scrub mitigation in San Diego California.

Client: Monsanto and James River Corporation (Clatskanie, Oregon)
Served as a soil scientist on a 50,000-acre hybrid poplar farm. Worked on genetically engineering study of Poplar trees to see if glyphosate resistant poplar clones were economically viable.

Client: World Wildlife Fund (St. Kitts, West Indies)
Managed 2-year biodiversity study, quantifying and qualifying the various flora and fauna in St. Kitts' expanding volcanic rainforest. Collaborated with skilled botanists, ornithologists and herpetologists.

Publications

Chen, J. A., Zapata, A R., Sutherland, A. J., Molmen, D. R,. Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. American Journal of Environmental Science, 2012, 8 (6), 622-632

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste*, Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2011). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences* 4(2011):113-125.

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Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.**, (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health* 73(6):34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries*, Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*, Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). 'Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States', in Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modelling, Monitoring and Management of Air Pollution*, Tallinn, Estonia. 20-22 July, 2009, Southampton, Boston. WIT Press.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. Organohalogen Compounds, Volume 70 (2008) page 002254.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. Organohalogen Compounds, Volume 70 (2008) page 000527.

Hensley, A.R. A. Scott, J. J. J. Clark, **P. E. Rosenfeld** (2007) "Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility" Environmental Research. 105, pp 194-197.
Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007) "The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities" –Water Science & Technology 55(5): 345-357.

Rosenfeld, P. E., M. Suffet. (2007) **"**The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment **"** Water Science & Technology 55(5): 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.,** (2007) "Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities," Elsevier Publishing, Boston Massachusetts.

Rosenfeld P.E., and Suffet, I.H. (Mel) (2007) "Anatomy Of An Odor Wheel" Water Science and Technology, In Press.

Rosenfeld, P.E., Clark, J.J.J., Hensley A.R., Suffet, I.H. (Mel) (2007) "The use of an odor wheel classification for evaluation of human health risk criteria for compost facilities." Water Science And Technology, In Press.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (2006) "Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006, August 21 – 25, 2006. Radisson SAS Scandinavia Hotel in Oslo Norway.

Rosenfeld, P.E., and Suffet I.H. (2004) "Control of Compost Odor Using High Carbon Wood Ash", Water Science and Technology, Vol. 49, No. 9. pp. 171-178.

Rosenfeld, P.E., Clark J. J. and Suffet, I.H. (2004) "Value of and Urban Odor Wheel.” (2004). WEFTEC 2004. New Orleans, October 2 - 6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004) "Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids" Water Science and Technology. Vol. 49, No. 9. pp 193-199.

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Rosenfeld, P.E., and Suffet I.H. (2004) "Control of Compost Odor Using High Carbon Wood Ash", Water Science and Technology, Vol. 49, No. 9. pp. 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004) Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. Water Environment Research. 76 (4): 310-315 JUL-AUG 2004.

Rosenfeld, P. E., Grey, M., (2003) Two stage biofilter for biosolids composting odor control. Seventh International In Situ And On Site Bioremediation Symposium. Batelle Conference Orlando Florida. June 2 and June 6, 2003.

Rosenfeld, P.E., Grey, M and Suffet, M. 2002. “Controlling Odors Using High Carbon Wood Ash.” Biocycle, March 2002, Page 42.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). “Compost Demonstration Project, Sacramento, California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility Integrated Waste Management Board Public Affairs Office, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008. April 2002.

Rosenfeld, P.E., and C.L. Henry. 2001. Characterization of odor emissions from three different biosolids. Water Soil and Air pollution. Vol. 127 Nos. 1-4, pp. 173-191.

Rosenfeld, P.E., and Henry C. L., 2000. Wood ash control of odor emissions from biosolids application. Journal of Environmental Quality. 29:1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. 2001. Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. Water Environment Research. 73: 363-367.

Rosenfeld, P.E., and C.L. Henry. 2001. Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants Water Environment Research, 73: 388-392.

Rosenfeld, P.E., and Henry C. L., 2001. High carbon wood ash effect on biosolids microbial activity and odor. Water Environment Research. Volume 131 No. 1-4, pp. 247-262.

Rosenfeld, P.E, C.L. Henry, R. Harrison. 1998. Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Bellevue Washington.

Chollack, T. and **P. Rosenfeld.** 1998. Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

P. Rosenfeld. 1992. The Mount Liamuiga Crater Trail. Heritage Magazine of St. Kitts, Vol. 3 No. 2.

P. Rosenfeld. 1993. High School Biogas Project to Prevent Deforestation On St. Kitts. Biomass Users Network, Vol. 7, No. 1, 1993.

P. Rosenfeld. 1992. British West Indies, St. Kitts. Surf Report, April issue.

P. Rosenfeld. 1998. Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

P. Rosenfeld. 1994. Potential Utilization of Small Diameter Trees On Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

P. Rosenfeld. 1991. How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

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England Environmental Agency, 2002. Landfill Gas Control Technologies. Publishing Organization Environment Agency, Rio House, Waterside Drive, Aztec West, Almondsbury BRISTOL, BS32 4UD.

Presentations

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** "Atrazine: A Persistent Pesticide in Urban Drinking Water." Urban Environmental Pollution, Boston, MA, June 20-23, 2010.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** "Bringing Environmental Justice to East St. Louis, Illinois." Urban Environmental Pollution, Boston, MA, June 20-23, 2010.

Rosenfeld, P.E. (2009) “Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States” Presentation at the 2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting, April 19-23, 2009. Tuscon, AZ.

Rosenfeld, P.E. (2009) “Cost to Filter Atrazine Contamination from Drinking Water in the United States” Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States” Presentation at the 2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting, April 19-23, 2009. Tuscon, AZ.

Rosenfeld, P. E. (2007) “Moss Point Community Exposure To Contaminants From A Releasing Facility” Platform Presentation at the 23rd Annual International Conferences on Soils Sediment and Water, October 15-18, 2007. University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (2007) “The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant” Platform Presentation at the 23rd Annual International Conferences on Soils Sediment and Water, October 15-18, 2007. University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (2007) “Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions” Poster Presentation at the 23rd Annual International Conferences on Soils Sediment and Water, October 15-18, 2007. University of Massachusetts, Amherst MA.

Rosenfeld P. E. “Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP)” – Platform Presentation at the Association for Environmental Health and Sciences (AEHS) Annual Meeting, San Diego, CA, 3/2007.

Rosenfeld P. E. “Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama” – Platform Presentation at the AEHS Annual Meeting, San Diego, CA, 3/2007.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (2006) “Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility.” APHA 134 Annual Meeting & Exposition, Boston Massachusetts. November 4 to 8th, 2006.

Paul Rosenfeld Ph.D. “Fate, Transport and Persistence of PFOA and Related Chemicals.” Mealey’s C8/PFOA Science, Risk & Litigation Conference” October 24, 25. The Rittenhouse Hotel, Philadelphia.

Paul Rosenfeld Ph.D. “Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation PEMA Emerging Contaminant Conference. September 19. Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. “Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP.” PEMA Emerging Contaminant Conference. September 19. Hilton Hotel in Irvine, California.

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continued

Paul Rosenfeld Ph.D. “Fate, Transport and Persistence of PDBEs.” Mealey’s Groundwater Conference. September 26, 27. Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. “Fate, Transport and Persistence of PFOA and Related Chemicals.” International Society of Environmental Forensics: Focus On Emerging Contaminants. June 7,8. Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. “Rate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals”. 2005 National Groundwater Association Ground Water And Environmental Law Conference. July 21-22, 2005. Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. “Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation.” 2005 National Groundwater Association Ground Water And Environmental Law Conference. July 21-22, 2005. Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. National Groundwater Association. Environmental Law Conference. May 5-6, 2004. Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D., 2004. Perchlorate Toxicology. Presentation to a meeting of the American Groundwater Trust. March 7th, 2004. Pheonix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse, 2004. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Paul Rosenfeld, Ph.D. A National Damage Assessment Model For PCE and Dry Cleaners. Drycleaner Symposium. California Ground Water Association. Radison Hotel, Sacramento, California. April 7, 2004.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants. February 20-21, 2003. Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. Underground Storage Tank Litigation and Remediation. California CUPA Forum. Marriott Hotel. Anaheim California. February 6-7, 2003.

Paul Rosenfeld, Ph.D. Underground Storage Tank Litigation and Remediation. EPA Underground Storage Tank Roundtable. Sacramento California. October 23, 2002.

Rosenfeld, P.E. and Suffet, M. 2002. Understanding Odor from Compost, Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association. Barcelona Spain. October 7- 10.

Rosenfeld, P.E. and Suffet, M. 2002. Using High Carbon Wood Ash to Control Compost Odor. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association. Barcelona Spain. October 7- 10.

Rosenfeld, P.E. and Grey, M. A. 2002. Biocycle Composting For Coastal Sage Restoration. Northwest Biosolids Management Association. Vancouver Washington. September 22-24.

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Rosenfeld, P.E. and Grey, M. A. 2002. Soil Science Society Annual Conference. Indianapolis, Maryland. November 11-14.

Rosenfeld. P.E. 2000. Two stage biofilter for biosolids composting odor control. Water Environment Federation. Anaheim California. September 16, 2000.

Rosenfeld. P. E. 2000. Wood ash and biofilter control of compost odor. Biofest. October 16, 2000.Ocean Shores, California.

Rosenfeld, P. E. 2000. Bioremediation Using Organic Soil Amendments. California Resource Recovery Association. Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. 1998. Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. 1999. An evaluation of ash incorporation with biosolids for odor reduction. Soil Science Society of America. Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. 1998. Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. Brown and Caldwell, Seattle Washington.

Rosenfeld, P.E., C.L. Henry. 1998. Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. Biofest Lake Chelan, Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. 1997. Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. Soil Science Society of America, Anaheim California.

Professional History

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Founding And Managing Partner
UCLA School of Public Health; 2007 to 2010; Lecturer (Asst Res)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist
Bureau of Land Management, Kremmling Colorado 1990; Scientist

Teaching Experience

UCLA Department of Environmental Health (Summer 2003 through 2010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focuses on the health effects of environmental contaminants.

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National Ground Water Association, Successful Remediation Technologies. Custom Course In Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5 2002 Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993.

Cases that Dr. Rosenfeld Provided Deposition or Trial Testimony

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continued

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)

In the Court of Common Pleas for the Second Judicial Circuit, State of South Carolina, County of Aiken
David Anderson, et al., *Plaintiffs*, vs. Norfolk Southern Corporation, et al., *Defendants*.
Case Number: 2007-CP-02-1584

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*
Civil action No. CV 2008-2076

In the Ninth Judicial District Court, Parish of Rapides, State of Louisiana
Roger Price, et al., *Plaintiffs*, vs. Roy O. Martin, L.P., et al., *Defendants*.
Civil Suit Number 224,041 Division G

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052

In the United States District Court for the Southern District of Ohio
Carolyn Baker, et al., *Plaintiffs*, vs. Chevron Oil Company, et al., *Defendants*.
Case Number 1:05 CV 227

In the Fourth Judicial District Court, Parish of Calcasieu, State of Louisiana
Craig Steven Arabie, et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 07-2738 G

In the Fourteenth Judicial District Court, Parish of Calcasieu, State of Louisiana
Leon B. Brydels, *Plaintiffs*, vs. Conoco, Inc., et al., *Defendants*.
Case Number 2004-6941 Division A

In the District Court of Tarrant County, Texas, 153rd Judicial District
Linda Faust, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, Witco Chemical Corporation A/K/A Witco Corporation, Solvents and Chemicals, Inc. and Koppers Industries, Inc., *Defendants*.
Case Number 153-212928-05

In the Superior Court of the State of California in and for the County of San Bernardino
Leroy Allen, et al., *Plaintiffs*, vs. Nutro Products, Inc., a California Corporation and DOES 1 to 100, inclusive, *Defendants*.
John Loney, Plaintiff, vs. James H. Didion, Sr.; Nutro Products, Inc.; DOES 1 through 20, inclusive, *Defendants*.
Case Number VCVVS044671

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.
Civil Action Number 2:09-cv-232-WHA-TFM

In the Superior Court of the State of California in and for the County of Los Angeles
Leslie Hensley and Rick Hensley, *Plaintiffs*, vs. Peter T. Hoss, as trustee on behalf of the Cone Fee Trust; Plains Exploration & Production Company, a Delaware corporation; Rayne Water Conditioning, Inc., a California corporation; and DOES 1 through 100, *Defendants.*
Case Number SC094173

In the Superior Court of the State of California in and for the County of Santa Barbara, Santa Maria Branch
Clifford and Shirley Adelhelm, et al., all individually, *Plaintiffs*, vs. Unocal Corporation, a Delaware Corporation; Union Oil Company of California, a California corporation; Chevron Corporation, a California corporation; ConocoPhillips, a Texas corporation; Kerr-McGee Corporation, an Oklahoma corporation; and DOES 1 though 100, *Defendants.*
Case Number 1229251 (Consolidated with case number 1231299)

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In the United States District Court for Eastern District of Arkansas, Eastern District of Arkansas
Harry Stephens Farms, Inc, and Harry Stephens, individual and as managing partner of Stephens Partnership, *Plaintiffs,* vs. Helena Chemical Company, and Exxon Mobil Corp., successor to Mobil Chemical Co., *Defendants.*
Case Number 2:06-CV-00166 JMM (Consolidated with case number 4:07CV00278 JMM)

In the United States District Court for the Western District of Arkansas, Texarkana Division
Rhonda Brasel, et al., *Plaintiffs*, vs. Weyerhaeuser Company and DOES 1 through 100, *Defendants.*
Civil Action Number 07-4037

In The Superior Court of the State of California County of Santa Cruz
Constance Acevedo, et al. *Plaintiffs* Vs. California Spray Company, et al. *Defendants*
Case No CV 146344

In the District Court of Texas 21st Judicial District of Burleson County
Dennis Davis, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, *Defendant.*
Case Number 25,151

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs,* vs. BP Products North America, Inc., *Defendant.*
Case 3:10-cv-00622

```
Start date and time  12/17/19 11:49:53

                             AERSCREEN 16216


Westport Construction


            Westport Construction



         -----------------  DATA ENTRY VALIDATION  -----------------
                        METRIC              ENGLISH
 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.334E-02 g/s         0.265E-01 lb/hr

 Area Height:           3.00 meters           9.84 feet

 Area Source Length:  264.00 meters         866.14 feet

 Area Source Width:   124.00 meters         406.82 feet

 Vertical Dimension:    1.50 meters           4.92 feet

 Model Mode:           URBAN

 Population:           60777

 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **
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No Building Downwash Parameters



** TERRAIN DATA **


No Terrain Elevations

Source Base Elevation:   0.0 meters        0.0  feet


Probe distance:   5000. meters       16404. feet


No flagpole receptors


No discrete receptors used



** FUMIGATION DATA **


No fumigation requested



** METEOROLOGY DATA **


Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F


Minimum Wind Speed:     0.5 m/s
```

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 Anemometer Height:   10.000 meters


 Dominant Surface Profile: Urban

 Dominant Climate Type:    Average Moisture


 Surface friction velocity (u*): not adjusted


DEBUG OPTION ON




 AERSCREEN output file:

 Westport_Construction.out



 *** AERSCREEN Run is Ready to Begin




 No terrain used, AERMAP will not be run

**************************************************


SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...
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Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season             Albedo     Bo       zo

Winter              0.35     1.50     1.000

Spring              0.14     1.00     1.000

Summer              0.16     2.00     1.000

Autumn              0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 12/17/19 11:50:45
 ********************************************


  Running AERMOD

 Processing Winter


Processing surface roughness sector  1
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*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
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*****************************************************
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
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Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************


  Running AERMOD
 Processing Spring


Processing surface roughness sector  1


*****************************************************
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES   ********
               ***  NONE  ***

 *****************************************************
 Processing wind flow sector   6

  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

 *****************************************************
 Processing wind flow sector   7

  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
  ********************************************

   Running AERMOD
  Processing Summer

 Processing surface roughness sector  1
```

```
*****************************************************
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
```

```
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ********************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********
               ***  NONE  ***


************************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


************************************************************
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


************************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


FLOWSECTOR   ended 12/17/19 11:51:01


REFINE       started 12/17/19 11:51:01


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********
```

```
                  ***  NONE  ***


 REFINE       ended 12/17/19 11:51:03


  **********************************************

  AERSCREEN Finished Successfully

  With no errors or warnings

  Check log file for details

  ***********************************************


  Ending date and time  12/17/19 11:51:05
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
 H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.30567E+01         1.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32789E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34819E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36578E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38122E+01       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39530E+01       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
*  0.39924E+01       133.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35022E+01       150.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25927E+01       175.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21191E+01       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18376E+01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16145E+01       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14341E+01       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12856E+01       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11620E+01       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10570E+01       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
310.0    2.0
   0.96798E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.89043E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.82322E+00       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.76409E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.71257E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.66612E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.62481E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.58796E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.55435E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52416E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49690E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47187E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44866E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42746E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40801E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39012E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37361E+00       775.00      0.00   0.0        Winter       0-360   10011001
```

```
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35816E+00       800.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34374E+00       825.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33030E+00       850.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31770E+00       875.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30593E+00       900.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29493E+00       925.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28462E+00       950.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27494E+00       975.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26580E+00      1000.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25711E+00      1025.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24891E+00      1050.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24116E+00      1075.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23384E+00      1100.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22690E+00      1125.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22032E+00      1150.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21408E+00      1175.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.20811E+00      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20241E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19698E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19180E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18686E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18214E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17761E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17324E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16905E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16504E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16120E+00      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15751E+00      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15396E+00      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15057E+00      1525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14729E+00      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14413E+00      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14109E+00      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.13817E+00      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13535E+00      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13263E+00      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13001E+00      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12747E+00      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12502E+00      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12266E+00      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12037E+00      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11815E+00      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11600E+00      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11391E+00      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11188E+00      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10992E+00      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10802E+00      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10617E+00      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10437E+00      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10262E+00      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10092E+00      2050.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.99271E-01      2075.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97667E-01      2100.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96107E-01      2125.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94590E-01      2150.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.93114E-01      2175.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.91678E-01      2200.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.90281E-01      2225.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.88924E-01      2250.00      0.00   5.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.87601E-01      2275.00      0.00   5.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.86310E-01      2300.00      0.00   5.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.85952E-01      2325.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.84702E-01      2350.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83484E-01      2375.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.82295E-01      2400.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.81136E-01      2425.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.80004E-01      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.78900E-01      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.77822E-01      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.76769E-01      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.75740E-01      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.74735E-01      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.73753E-01      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.72793E-01      2625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.71855E-01      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.70937E-01      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.70039E-01      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.69161E-01      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.68302E-01      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.67461E-01      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.66638E-01      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65832E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65043E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.64270E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.63513E-01      2900.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.62771E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.62044E-01      2950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.61331E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.60633E-01      3000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.59948E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.59277E-01      3050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.58618E-01      3075.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.57972E-01      3100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.57338E-01      3125.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56717E-01      3150.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56106E-01      3174.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.55507E-01      3199.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.54919E-01      3225.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.54342E-01      3250.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.53775E-01      3275.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.53218E-01      3300.00      0.00   5.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52672E-01      3325.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52134E-01      3350.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.51607E-01      3375.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.51088E-01      3400.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.50579E-01      3425.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.50078E-01      3450.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49585E-01      3475.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49102E-01      3500.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48626E-01      3525.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48158E-01      3550.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47698E-01      3575.00      0.00  15.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47245E-01      3600.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46800E-01      3625.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46362E-01      3650.00      0.00   0.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45931E-01      3675.00      0.00  20.0        Winter      0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.45507E-01      3700.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45089E-01      3725.00      0.00  15.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44679E-01      3750.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44274E-01      3775.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43876E-01      3800.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43484E-01      3825.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43099E-01      3849.99      0.00  15.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42718E-01      3875.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42344E-01      3900.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41976E-01      3925.00      0.00   5.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41613E-01      3950.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41255E-01      3975.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40903E-01      4000.00      0.00  10.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40556E-01      4025.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40213E-01      4050.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39876E-01      4075.00      0.00   0.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39544E-01      4100.00      0.00  10.0         Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.39217E-01      4125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38894E-01      4150.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38576E-01      4175.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38262E-01      4200.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37953E-01      4225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37648E-01      4250.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37347E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37050E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36757E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36469E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36184E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35903E-01      4400.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35626E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35352E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35083E-01      4475.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34816E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34553E-01      4525.00      0.00   0.0        Winter       0-360   10011001
```

```
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34294E-01      4550.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34038E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33785E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33535E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33289E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33046E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32806E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32569E-01      4725.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32334E-01      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32103E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31875E-01      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31649E-01      4825.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31426E-01      4850.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31206E-01      4875.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30988E-01      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30773E-01      4924.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.       6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

```
   0.30561E-01      4950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30351E-01      4975.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30144E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

```
Start date and time  12/17/19 11:51:12

                                AERSCREEN 16216


Westport Operation


            Westport Operation




         -----------------  DATA ENTRY VALIDATION  -----------------

                        METRIC              ENGLISH

 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.103E-02 g/s         0.815E-02 lb/hr

 Area Height:           3.00 meters           9.84 feet

 Area Source Length:  264.00 meters         866.14 feet

 Area Source Width:   124.00 meters         406.82 feet

 Vertical Dimension:    1.50 meters           4.92 feet

 Model Mode:           URBAN

 Population:           60777

 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **
```

```
No Building Downwash Parameters



** TERRAIN DATA **


No Terrain Elevations

Source Base Elevation:   0.0 meters        0.0  feet


Probe distance:   5000. meters       16404. feet


No flagpole receptors


No discrete receptors used



** FUMIGATION DATA **


No fumigation requested



** METEOROLOGY DATA **


Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F


Minimum Wind Speed:     0.5 m/s
```

```
 Anemometer Height:   10.000 meters


 Dominant Surface Profile: Urban

 Dominant Climate Type:    Average Moisture


 Surface friction velocity (u*): not adjusted


DEBUG OPTION ON






 AERSCREEN output file:

 Westport_Operation.out




 *** AERSCREEN Run is Ready to Begin






 No terrain used, AERMAP will not be run

**************************************************


SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...
```

```
Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season             Albedo     Bo       zo

Winter              0.35     1.50     1.000

Spring              0.14     1.00     1.000

Summer              0.16     2.00     1.000

Autumn              0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 12/17/19 11:51:53
 ********************************************


  Running AERMOD

 Processing Winter


Processing surface roughness sector  1
```

```
*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
```

```
*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************
```

```
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************


  Running AERMOD
 Processing Spring


Processing surface roughness sector  1


*****************************************************
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************
Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ********************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************
```

```
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ********************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********
               ***  NONE  ***


 **************************************************

 Processing wind flow sector   3


  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


 **************************************************

 Processing wind flow sector   4


  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


 **************************************************

 Processing wind flow sector   5


  AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


FLOWSECTOR   ended 12/17/19 11:52:10


REFINE       started 12/17/19 11:52:10


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********
```

```
               ***  NONE  ***


REFINE       ended 12/17/19 11:52:12


 **********************************************

 AERSCREEN Finished Successfully

 With no errors or warnings

 Check log file for details

 ***********************************************


 Ending date and time  12/17/19 11:52:14
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
 H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.94100E+00         1.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10094E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10719E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11261E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11736E+01       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12169E+01       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
*  0.12291E+01       133.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10782E+01       150.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.79816E+00       175.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65237E+00       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56572E+00       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49702E+00       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44148E+00       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39577E+00       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35772E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32540E+00       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
310.0    2.0
   0.29799E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27412E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25343E+00       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23523E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21937E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20507E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19235E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18100E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17066E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16136E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15297E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14526E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13812E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13159E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12561E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12010E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11502E+00       775.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11026E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10582E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10168E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97804E-01       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94182E-01       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.90794E-01       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.87620E-01       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.84639E-01       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.81828E-01      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.79151E-01      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.76627E-01      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.74242E-01      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.71987E-01      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.69852E-01      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.67826E-01      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65903E-01      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.64067E-01      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.62312E-01      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.60640E-01      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.59046E-01      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.57526E-01      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56073E-01      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.54676E-01      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.53331E-01      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52043E-01      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.50809E-01      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49625E-01      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48489E-01      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47398E-01      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46355E-01      1525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45344E-01      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44371E-01      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43436E-01      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.42536E-01      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41668E-01      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40831E-01      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40023E-01      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39242E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38488E-01      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37760E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37055E-01      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36373E-01      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35709E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35066E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34443E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33839E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33254E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32686E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32131E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31592E-01      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31069E-01      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30561E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30067E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29586E-01      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29120E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28665E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28223E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27793E-01      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27375E-01      2250.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26968E-01      2275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26571E-01      2300.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26460E-01      2325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26076E-01      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25701E-01      2375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25335E-01      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24978E-01      2425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.24629E-01      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24289E-01      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23958E-01      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23633E-01      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23317E-01      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23007E-01      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22705E-01      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22409E-01      2625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22120E-01      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21838E-01      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21562E-01      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21291E-01      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21027E-01      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20768E-01      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20514E-01      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20266E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20024E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.19786E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19553E-01      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19324E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19100E-01      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18881E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18666E-01      3000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18455E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18248E-01      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18046E-01      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17847E-01      3100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17652E-01      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17460E-01      3150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17272E-01      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17088E-01      3200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16907E-01      3225.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16729E-01      3250.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16555E-01      3275.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16383E-01      3300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16215E-01      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16050E-01      3350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15887E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15728E-01      3400.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15571E-01      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15417E-01      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15265E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15116E-01      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14969E-01      3525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14825E-01      3550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14684E-01      3575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14544E-01      3600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14407E-01      3625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14272E-01      3650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14140E-01      3675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.14009E-01      3700.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13881E-01      3725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13754E-01      3750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13630E-01      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13507E-01      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13387E-01      3825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13268E-01      3850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13151E-01      3875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13036E-01      3900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12922E-01      3925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12811E-01      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12700E-01      3975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12592E-01      4000.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12485E-01      4025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12380E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12276E-01      4075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12174E-01      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.12073E-01      4125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11974E-01      4150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11876E-01      4175.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11779E-01      4200.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11684E-01      4225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11590E-01      4250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11497E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11406E-01      4300.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11316E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11227E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11139E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.11053E-01      4400.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.10967E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.10883E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.10800E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.10718E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35   0.50   10.0
310.0    2.0
   0.10637E-01      4525.00      0.00   5.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10557E-01      4550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10479E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10401E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10324E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10248E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10173E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10099E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10026E-01      4725.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.99541E-02      4750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.98829E-02      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.98126E-02      4800.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97431E-02      4825.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96745E-02      4850.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96067E-02      4875.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.95398E-02      4900.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94736E-02      4924.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.94082E-02      4950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.93436E-02      4975.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.92798E-02      5000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

Westport

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	148.04	1000sqft	3.40	148,040.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Matches DEIR's model. See SWAPE comment about parking garage.

Construction Phase - Matches DEIR's model.

Grading -

Demolition - Matches DEIR's model.

Vehicle Trips - Matches DEIR's model.

Woodstoves - Matches DEIR's model.

Construction Off-road Equipment Mitigation - See SWAPE comment about construction mitigation measures.

Mobile Land Use Mitigation - See SWAPE comment about mobile mitigation measures.

Area Mitigation -

Water Mitigation - Matches DEIR's model.

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	109.00
tblConstructionPhase	NumDays	370.00	381.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	35.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	10/26/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	8/31/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/28/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	4/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	9/28/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	2/11/2019	2/13/2019
tblConstructionPhase	PhaseStartDate	9/29/2020	8/1/2020

tblConstructionPhase	PhaseStartDate	4/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	2/12/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	9/1/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	1/29/2019	1/31/2019
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	SU_TR	6.07	6.76
tblVehicleTrips	SU_TR	5.86	5.02
tblVehicleTrips	SU_TR	1.95	3.31
tblVehicleTrips	SU_TR	20.43	31.65
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5465	6.3394	3.8741	0.0111	0.7446	0.2319	0.9765	0.2772	0.2154	0.4926	0.0000	1,021.5433	1,021.5433	0.1589	0.0000	1,025.5151
2020	3.9719	3.6037	3.4792	8.6600e-003	0.3473	0.1588	0.5061	0.0936	0.1497	0.2433	0.0000	778.9596	778.9596	0.0909	0.0000	781.2315
Maximum	**3.9719**	**6.3394**	**3.8741**	**0.0111**	**0.7446**	**0.2319**	**0.9765**	**0.2772**	**0.2154**	**0.4926**	**0.0000**	**1,021.5433**	**1,021.5433**	**0.1589**	**0.0000**	**1,025.5151**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.5465	6.3394	3.8741	0.0111	0.7446	0.2319	0.9765	0.2772	0.2154	0.4926	0.0000	1,021.5428	1,021.5428	0.1589	0.0000	1,025.5145
2020	3.9719	3.6037	3.4792	8.6600e-003	0.3473	0.1588	0.5061	0.0936	0.1497	0.2433	0.0000	778.9592	778.9592	0.0909	0.0000	781.2312
Maximum	**3.9719**	**6.3394**	**3.8741**	**0.0111**	**0.7446**	**0.2319**	**0.9765**	**0.2772**	**0.2154**	**0.4926**	**0.0000**	**1,021.5428**	**1,021.5428**	**0.1589**	**0.0000**	**1,025.5145**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2019**	**3-31-2019**	2.2172	2.2172
2	**4-1-2019**	**6-30-2019**	2.5899	2.5899
3	**7-1-2019**	**9-30-2019**	0.9855	0.9855
4	**10-1-2019**	**12-31-2019**	1.0936	1.0936
5	**1-1-2020**	**3-31-2020**	0.9797	0.9797
6	**4-1-2020**	**6-30-2020**	0.9709	0.9709
7	**7-1-2020**	**9-30-2020**	2.4393	2.4393
		Highest	2.5899	2.5899

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3937	0.0276	1.9800	6.8000e-004		0.0384	0.0384		0.0384	0.0384	3.7744	7.4719	11.2463	0.0206	8.0000e-005	11.7863
Energy	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	736.7642	736.7642	0.0301	8.0100e-003	739.9035
Mobile	0.5756	2.3600	6.5771	0.0202	1.7496	0.0204	1.7700	0.4684	0.0191	0.4875	0.0000	1,848.8172	1,848.8172	0.0679	0.0000	1,850.5154
Waste						0.0000	0.0000		0.0000	0.0000	26.8598	0.0000	26.8598	1.5874	0.0000	66.5439
Water						0.0000	0.0000		0.0000	0.0000	5.4722	38.1972	43.6694	0.5638	0.0136	61.8251
Total	**2.9819**	**2.4954**	**8.6038**	**0.0216**	**1.7496**	**0.0675**	**1.8171**	**0.4684**	**0.0662**	**0.5346**	**36.1064**	**2,631.2505**	**2,667.3569**	**2.2698**	**0.0217**	**2,730.5741**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3747	0.0248	1.8072	1.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	7.4719	7.4719	2.9600e-003	8.0000e-005	7.5708
Energy	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	736.7642	736.7642	0.0301	8.0100e-003	739.9035
Mobile	0.5381	2.0924	5.6343	0.0165	1.3997	0.0168	1.4165	0.3747	0.0157	0.3904	0.0000	1,505.1366	1,505.1366	0.0583	0.0000	1,506.5928
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	4.3778	32.0931	36.4708	0.4511	0.0109	51.0014
Total	**2.9254**	**2.2250**	**7.4882**	**0.0173**	**1.3997**	**0.0357**	**1.4354**	**0.3747**	**0.0347**	**0.4094**	**4.3778**	**2,281.4658**	**2,285.8436**	**0.5424**	**0.0190**	**2,305.0684**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**1.89**	**10.83**	**12.97**	**20.01**	**20.00**	**47.11**	**21.01**	**20.00**	**47.67**	**23.43**	**87.88**	**13.29**	**14.30**	**76.10**	**12.48**	**15.58**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	
2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 4.45

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped Parking Area: 11,690 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	262.00	61.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0351	0.0000	0.0351	5.3100e-003	0.0000	5.3100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.3936	0.2427	4.3000e-004		0.0197	0.0197		0.0184	0.0184	0.0000	38.0890	38.0890	0.0106	0.0000	38.3539
Total	**0.0387**	**0.3936**	**0.2427**	**4.3000e-004**	**0.0351**	**0.0197**	**0.0548**	**5.3100e-003**	**0.0184**	**0.0237**	**0.0000**	**38.0890**	**38.0890**	**0.0106**	**0.0000**	**38.3539**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4700e-003	0.0504	9.9600e-003	1.3000e-004	2.7500e-003	1.9000e-004	2.9400e-003	7.5000e-004	1.9000e-004	9.4000e-004	0.0000	12.4845	12.4845	5.9000e-004	0.0000	12.4991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**2.0700e-003**	**0.0509**	**0.0146**	**1.4000e-004**	**4.0600e-003**	**2.0000e-004**	**4.2600e-003**	**1.1000e-003**	**2.0000e-004**	**1.3000e-003**	**0.0000**	**13.6429**	**13.6429**	**6.2000e-004**	**0.0000**	**13.6583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0351	0.0000	0.0351	5.3100e-003	0.0000	5.3100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0387	0.3936	0.2427	4.3000e-004		0.0197	0.0197		0.0184	0.0184	0.0000	38.0889	38.0889	0.0106	0.0000	38.3538
Total	**0.0387**	**0.3936**	**0.2427**	**4.3000e-004**	**0.0351**	**0.0197**	**0.0548**	**5.3100e-003**	**0.0184**	**0.0237**	**0.0000**	**38.0889**	**38.0889**	**0.0106**	**0.0000**	**38.3538**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4700e-003	0.0504	9.9600e-003	1.3000e-004	2.7500e-003	1.9000e-004	2.9400e-003	7.5000e-004	1.9000e-004	9.4000e-004	0.0000	12.4845	12.4845	5.9000e-004	0.0000	12.4991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**2.0700e-003**	**0.0509**	**0.0146**	**1.4000e-004**	**4.0600e-003**	**2.0000e-004**	**4.2600e-003**	**1.1000e-003**	**2.0000e-004**	**1.3000e-003**	**0.0000**	**13.6429**	**13.6429**	**6.2000e-004**	**0.0000**	**13.6583**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.4000e-004	2.5100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6319	0.6319	2.0000e-005	0.0000	0.6323
Total	**3.3000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6319**	**0.6319**	**2.0000e-005**	**0.0000**	**0.6323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.4000e-004	2.5100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6319	0.6319	2.0000e-005	0.0000	0.6323
Total	**3.3000e-004**	**2.4000e-004**	**2.5100e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6319**	**0.6319**	**2.0000e-005**	**0.0000**	**0.6323**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3855	0.0000	0.3855	0.1588	0.0000	0.1588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2085	2.3989	1.4686	2.7300e-003		0.1048	0.1048		0.0965	0.0965	0.0000	245.0858	245.0858	0.0775	0.0000	247.0244
Total	**0.2085**	**2.3989**	**1.4686**	**2.7300e-003**	**0.3855**	**0.1048**	**0.4904**	**0.1588**	**0.0965**	**0.2553**	**0.0000**	**245.0858**	**245.0858**	**0.0775**	**0.0000**	**247.0244**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0392	1.3427	0.2652	3.4400e-003	0.0731	5.1500e-003	0.0783	0.0201	4.9300e-003	0.0250	0.0000	332.3406	332.3406	0.0156	0.0000	332.7299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.3800e-003	0.0246	7.0000e-005	6.9800e-003	5.0000e-005	7.0300e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.1783	6.1783	1.7000e-004	0.0000	6.1825
Total	**0.0424**	**1.3451**	**0.2898**	**3.5100e-003**	**0.0801**	**5.2000e-003**	**0.0853**	**0.0220**	**4.9700e-003**	**0.0269**	**0.0000**	**338.5189**	**338.5189**	**0.0157**	**0.0000**	**338.9124**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3855	0.0000	0.3855	0.1588	0.0000	0.1588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2085	2.3989	1.4686	2.7300e-003		0.1048	0.1048		0.0965	0.0965	0.0000	245.0855	245.0855	0.0775	0.0000	247.0241
Total	**0.2085**	**2.3989**	**1.4686**	**2.7300e-003**	**0.3855**	**0.1048**	**0.4904**	**0.1588**	**0.0965**	**0.2553**	**0.0000**	**245.0855**	**245.0855**	**0.0775**	**0.0000**	**247.0241**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0392	1.3427	0.2652	3.4400e-003	0.0731	5.1500e-003	0.0783	0.0201	4.9300e-003	0.0250	0.0000	332.3406	332.3406	0.0156	0.0000	332.7299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.3800e-003	0.0246	7.0000e-005	6.9800e-003	5.0000e-005	7.0300e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.1783	6.1783	1.7000e-004	0.0000	6.1825
Total	**0.0424**	**1.3451**	**0.2898**	**3.5100e-003**	**0.0801**	**5.2000e-003**	**0.0853**	**0.0220**	**4.9700e-003**	**0.0269**	**0.0000**	**338.5189**	**338.5189**	**0.0157**	**0.0000**	**338.9124**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1405	1.2542	1.0212	1.6000e-003		0.0768	0.0768		0.0722	0.0722	0.0000	139.8870	139.8870	0.0341	0.0000	140.7389
Total	**0.1405**	**1.2542**	**1.0212**	**1.6000e-003**		**0.0768**	**0.0768**		**0.0722**	**0.0722**	**0.0000**	**139.8870**	**139.8870**	**0.0341**	**0.0000**	**140.7389**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.4583	0.1230	1.0000e-003	0.0239	3.2900e-003	0.0272	6.9000e-003	3.1500e-003	0.0101	0.0000	95.4747	95.4747	4.7400e-003	0.0000	95.5931
Worker	0.0566	0.0422	0.4355	1.2100e-003	0.1236	8.2000e-004	0.1245	0.0329	7.5000e-004	0.0336	0.0000	109.4478	109.4478	2.9800e-003	0.0000	109.5223
Total	**0.0744**	**0.5005**	**0.5585**	**2.2100e-003**	**0.1475**	**4.1100e-003**	**0.1516**	**0.0398**	**3.9000e-003**	**0.0437**	**0.0000**	**204.9224**	**204.9224**	**7.7200e-003**	**0.0000**	**205.1153**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1405	1.2542	1.0212	1.6000e-003		0.0768	0.0768		0.0722	0.0722	0.0000	139.8868	139.8868	0.0341	0.0000	140.7388
Total	**0.1405**	**1.2542**	**1.0212**	**1.6000e-003**		**0.0768**	**0.0768**		**0.0722**	**0.0722**	**0.0000**	**139.8868**	**139.8868**	**0.0341**	**0.0000**	**140.7388**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.4583	0.1230	1.0000e-003	0.0239	3.2900e-003	0.0272	6.9000e-003	3.1500e-003	0.0101	0.0000	95.4747	95.4747	4.7400e-003	0.0000	95.5931
Worker	0.0566	0.0422	0.4355	1.2100e-003	0.1236	8.2000e-004	0.1245	0.0329	7.5000e-004	0.0336	0.0000	109.4478	109.4478	2.9800e-003	0.0000	109.5223
Total	**0.0744**	**0.5005**	**0.5585**	**2.2100e-003**	**0.1475**	**4.1100e-003**	**0.1516**	**0.0398**	**3.9000e-003**	**0.0437**	**0.0000**	**204.9224**	**204.9224**	**7.7200e-003**	**0.0000**	**205.1153**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0317	0.9099	0.2423	2.1800e-003	0.0526	4.5100e-003	0.0571	0.0152	4.3100e-003	0.0195	0.0000	208.9189	208.9189	9.5800e-003	0.0000	209.1585
Worker	0.1140	0.0819	0.8590	2.5800e-003	0.2722	1.7600e-003	0.2740	0.0724	1.6200e-003	0.0740	0.0000	233.4409	233.4409	5.7300e-003	0.0000	233.5841
Total	**0.1457**	**0.9918**	**1.1013**	**4.7600e-003**	**0.3248**	**6.2700e-003**	**0.3310**	**0.0876**	**5.9300e-003**	**0.0935**	**0.0000**	**442.3598**	**442.3598**	**0.0153**	**0.0000**	**442.7425**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0317	0.9099	0.2423	2.1800e-003	0.0526	4.5100e-003	0.0571	0.0152	4.3100e-003	0.0195	0.0000	208.9189	208.9189	9.5800e-003	0.0000	209.1585
Worker	0.1140	0.0819	0.8590	2.5800e-003	0.2722	1.7600e-003	0.2740	0.0724	1.6200e-003	0.0740	0.0000	233.4409	233.4409	5.7300e-003	0.0000	233.5841
Total	**0.1457**	**0.9918**	**1.1013**	**4.7600e-003**	**0.3248**	**6.2700e-003**	**0.3310**	**0.0876**	**5.9300e-003**	**0.0935**	**0.0000**	**442.3598**	**442.3598**	**0.0153**	**0.0000**	**442.7425**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1677	0.1613	2.5000e-004		9.0700e-003	9.0700e-003		8.3400e-003	8.3400e-003	0.0000	22.5227	22.5227	7.1300e-003	0.0000	22.7009
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1677**	**0.1613**	**2.5000e-004**		**9.0700e-003**	**9.0700e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**22.5227**	**22.5227**	**7.1300e-003**	**0.0000**	**22.7009**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**6.0000e-004**	**4.5000e-004**	**4.6100e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1584**	**1.1584**	**3.0000e-005**	**0.0000**	**1.1592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1677	0.1613	2.5000e-004		9.0700e-003	9.0700e-003		8.3400e-003	8.3400e-003	0.0000	22.5227	22.5227	7.1300e-003	0.0000	22.7008
Paving	1.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1677**	**0.1613**	**2.5000e-004**		**9.0700e-003**	**9.0700e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**22.5227**	**22.5227**	**7.1300e-003**	**0.0000**	**22.7008**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.5000e-004	4.6100e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1584	1.1584	3.0000e-005	0.0000	1.1592
Total	**6.0000e-004**	**4.5000e-004**	**4.6100e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1584**	**1.1584**	**3.0000e-005**	**0.0000**	**1.1592**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**3.5392**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4100e-003	6.7600e-003	0.0709	2.1000e-004	0.0225	1.5000e-004	0.0226	5.9800e-003	1.3000e-004	6.1100e-003	0.0000	19.2754	19.2754	4.7000e-004	0.0000	19.2873
Total	**9.4100e-003**	**6.7600e-003**	**0.0709**	**2.1000e-004**	**0.0225**	**1.5000e-004**	**0.0226**	**5.9800e-003**	**1.3000e-004**	**6.1100e-003**	**0.0000**	**19.2754**	**19.2754**	**4.7000e-004**	**0.0000**	**19.2873**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0918	0.0998	1.6000e-004		6.0500e-003	6.0500e-003		6.0500e-003	6.0500e-003	0.0000	13.9152	13.9152	1.0800e-003	0.0000	13.9422
Total	**3.5392**	**0.0918**	**0.0998**	**1.6000e-004**		**6.0500e-003**	**6.0500e-003**		**6.0500e-003**	**6.0500e-003**	**0.0000**	**13.9152**	**13.9152**	**1.0800e-003**	**0.0000**	**13.9422**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4100e-003	6.7600e-003	0.0709	2.1000e-004	0.0225	1.5000e-004	0.0226	5.9800e-003	1.3000e-004	6.1100e-003	0.0000	19.2754	19.2754	4.7000e-004	0.0000	19.2873
Total	**9.4100e-003**	**6.7600e-003**	**0.0709**	**2.1000e-004**	**0.0225**	**1.5000e-004**	**0.0226**	**5.9800e-003**	**1.3000e-004**	**6.1100e-003**	**0.0000**	**19.2754**	**19.2754**	**4.7000e-004**	**0.0000**	**19.2873**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5381	2.0924	5.6343	0.0165	1.3997	0.0168	1.4165	0.3747	0.0157	0.3904	0.0000	1,505.1366	1,505.1366	0.0583	0.0000	1,506.5928
Unmitigated	0.5756	2.3600	6.5771	0.0202	1.7496	0.0204	1.7700	0.4684	0.0191	0.4875	0.0000	1,848.8172	1,848.8172	0.0679	0.0000	1,850.5154

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	594.88	1,466,851	1,173,481
Apartments Mid Rise	625.60	734.85	577.30	1,465,000	1,172,000
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	129.09	308,699	246,959
Strip Mall	755.00	840.80	633.00	1,464,485	1,171,588
Total	2,170.23	2,284.90	1,934.27	4,705,036	3,764,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	60	40	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	612.0962	612.0962	0.0277	5.7300e-003	614.4946
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	612.0962	612.0962	0.0277	5.7300e-003	614.4946
NaturalGas Mitigated	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6680	124.6680	2.3900e-003	2.2900e-003	125.4089
NaturalGas Unmitigated	0.0126	0.1078	0.0468	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.6680	124.6680	2.3900e-003	2.2900e-003	125.4089

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Apartments Mid Rise	993537	5.3600e-003	0.0458	0.0195	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	53.0189	53.0189	1.0200e-003	9.7000e-004	53.3340
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	397755	2.1400e-003	0.0183	7.8000e-003	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.2257	21.2257	4.1000e-004	3.9000e-004	21.3519
Strip Mall	47400	2.6000e-004	2.3200e-003	1.9500e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5294	2.5294	5.0000e-005	5.0000e-005	2.5445
Total		**0.0126**	**0.1078**	**0.0468**	**6.8000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.6680**	**124.6680**	**2.4000e-003**	**2.2900e-003**	**125.4089**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Apartments Mid Rise	993537	5.3600e-003	0.0458	0.0195	2.9000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	53.0189	53.0189	1.0200e-003	9.7000e-004	53.3340
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	397755	2.1400e-003	0.0183	7.8000e-003	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.2257	21.2257	4.1000e-004	3.9000e-004	21.3519
Strip Mall	47400	2.6000e-004	2.3200e-003	1.9500e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5294	2.5294	5.0000e-005	5.0000e-005	2.5445
Total		**0.0126**	**0.1078**	**0.0468**	**6.8000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.6680**	**124.6680**	**2.4000e-003**	**2.2900e-003**	**125.4089**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664
Apartments Mid Rise	474760	138.1132	6.2500e-003	1.2900e-003	138.6544
Enclosed Parking Structure	839387	244.1872	0.0110	2.2800e-003	245.1440
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	177042	51.5036	2.3300e-003	4.8000e-004	51.7054
Strip Mall	213800	62.1969	2.8100e-003	5.8000e-004	62.4406
Total		**612.0962**	**0.0277**	**5.7100e-003**	**614.4946**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664
Apartments Mid Rise	474760	138.1132	6.2500e-003	1.2900e-003	138.6544
Enclosed Parking Structure	839387	244.1872	0.0110	2.2800e-003	245.1440
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	177042	51.5036	2.3300e-003	4.8000e-004	51.7054
Strip Mall	213800	62.1969	2.8100e-003	5.8000e-004	62.4406
Total		**612.0962**	**0.0277**	**5.7100e-003**	**614.4946**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3747	0.0248	1.8072	1.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	7.4719	7.4719	2.9600e-003	8.0000e-005	7.5708
Unmitigated	2.3937	0.0276	1.9800	6.8000e-004		0.0384	0.0384		0.0384	0.0384	3.7744	7.4719	11.2463	0.0206	8.0000e-005	11.7863

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3526					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9665					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0195	6.7300e-003	0.1745	5.9000e-004		0.0285	0.0285		0.0285	0.0285	3.7744	4.5317	8.3061	0.0177	8.0000e-005	8.7741
Landscaping	0.0552	0.0209	1.8055	1.0000e-004		9.9200e-003	9.9200e-003		9.9200e-003	9.9200e-003	0.0000	2.9403	2.9403	2.8800e-003	0.0000	3.0122
Total	**2.3938**	**0.0276**	**1.9800**	**6.9000e-004**		**0.0384**	**0.0384**		**0.0384**	**0.0384**	**3.7744**	**7.4719**	**11.2463**	**0.0206**	**8.0000e-005**	**11.7863**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3526					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9665					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.6000e-004	3.9100e-003	1.6700e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5317	4.5317	9.0000e-005	8.0000e-005	4.5586
Landscaping	0.0552	0.0209	1.8055	1.0000e-004		9.9200e-003	9.9200e-003		9.9200e-003	9.9200e-003	0.0000	2.9403	2.9403	2.8800e-003	0.0000	3.0122
Total	**2.3747**	**0.0248**	**1.8072**	**1.2000e-004**		**0.0102**	**0.0102**		**0.0102**	**0.0102**	**0.0000**	**7.4719**	**7.4719**	**2.9700e-003**	**8.0000e-005**	**7.5708**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.4708	0.4511	0.0109	51.0014
Unmitigated	43.6694	0.5638	0.0136	61.8251

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.73355 / 3.61463	14.5247	0.1874	4.5300e-003	20.5598
Apartments Mid Rise	7.49271 / 4.72367	18.9811	0.2449	5.9200e-003	26.8679
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.54101 / 1.60194	6.4371	0.0831	2.0100e-003	9.1117
Strip Mall	1.48145 / 0.907986	3.7265	0.0484	1.1700e-003	5.2857
Total		**43.6694**	**0.5638**	**0.0136**	**61.8251**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.58684 / 3.39414	12.1313	0.1500	3.6300e-003	16.9614
Apartments Mid Rise	5.99417 / 4.43552	15.8534	0.1960	4.7400e-003	22.1655
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.03281 / 1.50422	5.3764	0.0665	1.6100e-003	7.5170
Strip Mall	1.18516 / 0.852599	3.1097	0.0387	9.4000e-004	4.3576
Total		**36.4708**	**0.4511**	**0.0109**	**51.0014**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	26.8598	1.5874	0.0000	66.5439

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	40.48	8.2171	0.4856	0.0000	20.3575
Apartments Mid Rise	52.9	10.7382	0.6346	0.0000	26.6035
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	17.94	3.6417	0.2152	0.0000	9.0221
Strip Mall	21	4.2628	0.2519	0.0000	10.5609
Total		**26.8598**	**1.5874**	**0.0000**	**66.5439**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise		0.0000	0.0000	0.0000	0.0000
Apartments Mid Rise		0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure		0.0000	0.0000	0.0000	0.0000
Parking Lot		0.0000	0.0000	0.0000	0.0000
Retirement Community		0.0000	0.0000	0.0000	0.0000
Strip Mall		0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Westport

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	148.04	1000sqft	3.40	148,040.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Matches DEIR's model. See SWAPE comment about parking garage.

Construction Phase - Matches DEIR's model.

Grading -

Demolition - Matches DEIR's model.

Vehicle Trips - Matches DEIR's model.

Woodstoves - Matches DEIR's model.

Construction Off-road Equipment Mitigation - See SWAPE comment about construction mitigation measures.

Mobile Land Use Mitigation - See SWAPE comment about mobile mitigation measures.

Area Mitigation -

Water Mitigation - Matches DEIR's model.

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	109.00
tblConstructionPhase	NumDays	370.00	381.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	35.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	10/26/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	8/31/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/28/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	4/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	9/28/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	2/11/2019	2/13/2019
tblConstructionPhase	PhaseStartDate	9/29/2020	8/1/2020

tblConstructionPhase	PhaseStartDate	4/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	2/12/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	9/1/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	1/29/2019	1/31/2019
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	SU_TR	6.07	6.76
tblVehicleTrips	SU_TR	5.86	5.02
tblVehicleTrips	SU_TR	1.95	3.31
tblVehicleTrips	SU_TR	20.43	31.65
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.7250	85.2206	40.2499	0.1409	18.2141	2.5021	20.6054	9.9699	2.3063	12.1699	0.0000	14,538.2744	14,538.2744	2.3478	0.0000	14,596.9697
2020	68.4688	28.6275	28.6614	0.0696	2.9924	1.2788	4.2712	0.8031	1.2093	2.0124	0.0000	6,891.3899	6,891.3899	0.7862	0.0000	6,911.0459
Maximum	**68.4688**	**85.2206**	**40.2499**	**0.1409**	**18.2141**	**2.5021**	**20.6054**	**9.9699**	**2.3063**	**12.1699**	**0.0000**	**14,538.2744**	**14,538.2744**	**2.3478**	**0.0000**	**14,596.9697**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.7250	85.2206	40.2499	0.1409	18.2141	2.5021	20.6054	9.9699	2.3063	12.1699	0.0000	14,538.2744	14,538.2744	2.3478	0.0000	14,596.9697
2020	68.4688	28.6275	28.6614	0.0696	2.9924	1.2788	4.2712	0.8031	1.2093	2.0124	0.0000	6,891.3899	6,891.3899	0.7862	0.0000	6,911.0459
Maximum	**68.4688**	**85.2206**	**40.2499**	**0.1409**	**18.2141**	**2.5021**	**20.6054**	**9.9699**	**2.3063**	**12.1699**	**0.0000**	**14,538.2744**	**14,538.2744**	**2.3478**	**0.0000**	**14,596.9697**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.0975	1.3337	44.8349	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8356	1,522.1518	2.8073	0.0164	1,597.2350
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.4626	14.5522	41.4712	0.1206	10.9218	0.1233	11.0451	2.9155	0.1157	3.0312		12,146.3400	12,146.3400	0.4627		12,157.9062
Total	**19.6291**	**16.4766**	**86.5627**	**0.2097**	**10.9218**	**4.3307**	**15.2525**	**2.9155**	**4.3231**	**7.2386**	**589.3162**	**13,832.1782**	**14,421.4944**	**3.2844**	**0.0303**	**14,512.6186**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.4024	0.9345	20.3599	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8356	932.8356	0.0524	0.0164	939.0455
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.2356	12.8703	35.7986	0.0981	8.7374	0.1016	8.8390	2.3324	0.0953	2.4277		9,882.6913	9,882.6913	0.3986		9,892.6570
Total	**16.7070**	**14.3954**	**56.4151**	**0.1074**	**8.7374**	**0.3164**	**9.0538**	**2.3324**	**0.3101**	**2.6424**	**0.0000**	**11,568.5295**	**11,568.5295**	**0.4655**	**0.0303**	**11,589.1798**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**14.89**	**12.63**	**34.83**	**48.79**	**20.00**	**92.69**	**40.64**	**20.00**	**92.83**	**63.50**	**100.00**	**16.37**	**19.78**	**85.83**	**0.00**	**20.14**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	
2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 4.45

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped Parking Area: 11,690 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	262.00	61.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1881	0.0000	3.1881	0.4827	0.0000	0.4827			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**3.1881**	**1.7949**	**4.9830**	**0.4827**	**1.6697**	**2.1524**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1360	4.6042	0.9471	0.0116	0.2574	0.0178	0.2752	0.0705	0.0170	0.0876		1,238.9588	1,238.9588	0.0603		1,240.4649
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.1966**	**4.6485**	**1.3747**	**0.0128**	**0.3806**	**0.0186**	**0.3992**	**0.1032**	**0.0178**	**0.1210**		**1,353.6110**	**1,353.6110**	**0.0634**		**1,355.1964**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1881	0.0000	3.1881	0.4827	0.0000	0.4827			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**3.1881**	**1.7949**	**4.9830**	**0.4827**	**1.6697**	**2.1524**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1360	4.6042	0.9471	0.0116	0.2574	0.0178	0.2752	0.0705	0.0170	0.0876		1,238.9588	1,238.9588	0.0603		1,240.4649
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.1966**	**4.6485**	**1.3747**	**0.0128**	**0.3806**	**0.0186**	**0.3992**	**0.1032**	**0.0178**	**0.1210**		**1,353.6110**	**1,353.6110**	**0.0634**		**1,355.1964**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.0532	0.5131	1.3800e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		137.5827	137.5827	3.8000e-003		137.6777
Total	**0.0727**	**0.0532**	**0.5131**	**1.3800e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**137.5827**	**137.5827**	**3.8000e-003**		**137.6777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.0532	0.5131	1.3800e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		137.5827	137.5827	3.8000e-003		137.6777
Total	**0.0727**	**0.0532**	**0.5131**	**1.3800e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**137.5827**	**137.5827**	**3.8000e-003**		**137.6777**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7620	0.0000	8.7620	3.6099	0.0000	3.6099			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.7620**	**2.3827**	**11.1447**	**3.6099**	**2.1920**	**5.8020**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9052	30.6414	6.3030	0.0774	1.7128	0.1184	1.8312	0.4694	0.1133	0.5827		8,245.3852	8,245.3852	0.4010		8,255.4091
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.0591	0.5701	1.5400e-003	0.1643	1.0500e-003	0.1653	0.0436	9.6000e-004	0.0445		152.8697	152.8697	4.2200e-003		152.9752
Total	**0.9861**	**30.7004**	**6.8731**	**0.0789**	**1.8771**	**0.1195**	**1.9965**	**0.5130**	**0.1143**	**0.6273**		**8,398.2550**	**8,398.2550**	**0.4052**		**8,408.3843**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7620	0.0000	8.7620	3.6099	0.0000	3.6099			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.7620**	**2.3827**	**11.1447**	**3.6099**	**2.1920**	**5.8020**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9052	30.6414	6.3030	0.0774	1.7128	0.1184	1.8312	0.4694	0.1133	0.5827		8,245.3852	8,245.3852	0.4010		8,255.4091
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.0591	0.5701	1.5400e-003	0.1643	1.0500e-003	0.1653	0.0436	9.6000e-004	0.0445		152.8697	152.8697	4.2200e-003		152.9752
Total	**0.9861**	**30.7004**	**6.8731**	**0.0789**	**1.8771**	**0.1195**	**1.9965**	**0.5130**	**0.1143**	**0.6273**		**8,398.2550**	**8,398.2550**	**0.4052**		**8,408.3843**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3077	7.7026	2.2104	0.0165	0.4130	0.0558	0.4688	0.1189	0.0534	0.1723		1,742.9322	1,742.9322	0.0914		1,745.2174
Worker	1.0587	0.7740	7.4687	0.0201	2.1523	0.0137	2.1660	0.5709	0.0126	0.5835		2,002.5932	2,002.5932	0.0553		2,003.9754
Total	**1.3664**	**8.4766**	**9.6792**	**0.0366**	**2.5652**	**0.0696**	**2.6348**	**0.6898**	**0.0661**	**0.7558**		**3,745.5254**	**3,745.5254**	**0.1467**		**3,749.1927**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3077	7.7026	2.2104	0.0165	0.4130	0.0558	0.4688	0.1189	0.0534	0.1723		1,742.932 2	1,742.932 2	0.0914		1,745.217 4
Worker	1.0587	0.7740	7.4687	0.0201	2.1523	0.0137	2.1660	0.5709	0.0126	0.5835		2,002.593 2	2,002.593 2	0.0553		2,003.975 4
Total	**1.3664**	**8.4766**	**9.6792**	**0.0366**	**2.5652**	**0.0696**	**2.6348**	**0.6898**	**0.0661**	**0.7558**		**3,745.525 4**	**3,745.525 4**	**0.1467**		**3,749.192 7**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.063 1**	**2,553.063 1**	**0.6229**		**2,568.634 5**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2494	6.9390	1.9794	0.0164	0.4130	0.0347	0.4477	0.1189	0.0332	0.1521		1,731.8150	1,731.8150	0.0840		1,733.9138
Worker	0.9687	0.6831	6.6769	0.0195	2.1523	0.0134	2.1657	0.5709	0.0124	0.5833		1,940.0214	1,940.0214	0.0481		1,941.2237
Total	**1.2181**	**7.6221**	**8.6563**	**0.0359**	**2.5653**	**0.0481**	**2.6134**	**0.6898**	**0.0456**	**0.7353**		**3,671.8363**	**3,671.8363**	**0.1320**		**3,675.1375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2494	6.9390	1.9794	0.0164	0.4130	0.0347	0.4477	0.1189	0.0332	0.1521		1,731.8150	1,731.8150	0.0840		1,733.9138
Worker	0.9687	0.6831	6.6769	0.0195	2.1523	0.0134	2.1657	0.5709	0.0124	0.5833		1,940.0214	1,940.0214	0.0481		1,941.2237
Total	**1.2181**	**7.6221**	**8.6563**	**0.0359**	**2.5653**	**0.0481**	**2.6134**	**0.6898**	**0.0456**	**0.7353**		**3,671.8363**	**3,671.8363**	**0.1320**		**3,675.1375**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.0606**	**0.0443**	**0.4276**	**1.1500e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.2000e-004**	**0.0334**		**114.6523**	**114.6523**	**3.1700e-003**		**114.7314**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0443	0.4276	1.1500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		114.6523	114.6523	3.1700e-003		114.7314
Total	**0.0606**	**0.0443**	**0.4276**	**1.1500e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.2000e-004**	**0.0334**		**114.6523**	**114.6523**	**3.1700e-003**		**114.7314**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.6964					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**64.9386**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1923	0.1356	1.3252	3.8600e-003	0.4272	2.6600e-003	0.4298	0.1133	2.4500e-003	0.1158		385.0424	385.0424	9.5500e-003		385.2810
Total	**0.1923**	**0.1356**	**1.3252**	**3.8600e-003**	**0.4272**	**2.6600e-003**	**0.4298**	**0.1133**	**2.4500e-003**	**0.1158**		**385.0424**	**385.0424**	**9.5500e-003**		**385.2810**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.6964					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**64.9386**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1923	0.1356	1.3252	3.8600e-003	0.4272	2.6600e-003	0.4298	0.1133	2.4500e-003	0.1158		385.0424	385.0424	9.5500e-003		385.2810
Total	**0.1923**	**0.1356**	**1.3252**	**3.8600e-003**	**0.4272**	**2.6600e-003**	**0.4298**	**0.1133**	**2.4500e-003**	**0.1158**		**385.0424**	**385.0424**	**9.5500e-003**		**385.2810**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.2356	12.8703	35.7986	0.0981	8.7374	0.1016	8.8390	2.3324	0.0953	2.4277		9,882.6913	9,882.6913	0.3986		9,892.6570
Unmitigated	3.4626	14.5522	41.4712	0.1206	10.9218	0.1233	11.0451	2.9155	0.1157	3.0312		12,146.3400	12,146.3400	0.4627		12,157.9062

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	594.88	1,466,851	1,173,481
Apartments Mid Rise	625.60	734.85	577.30	1,465,000	1,172,000
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	129.09	308,699	246,959
Strip Mall	755.00	840.80	633.00	1,464,485	1,171,588
Total	2,170.23	2,284.90	1,934.27	4,705,036	3,764,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	60	40	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
NaturalGas Unmitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2458.9	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2722.02	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1089.74	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	129.863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2.4589	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2.72202	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1.08974	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	0.129863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.4024	0.9345	20.3599	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8356	932.8356	0.0524	0.0164	939.0455
Unmitigated	16.0975	1.3337	44.8349	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8356	1,522.1518	2.8073	0.0164	1,597.2350

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.7773	1.1018	24.7739	0.0843		4.0495	4.0495		4.0495	4.0495	589.3162	896.8235	1,486.1397	2.7721	0.0164	1,560.3425
Landscaping	0.6127	0.2320	20.0610	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0121	36.0121	0.0352		36.8926
Total	**16.0975**	**1.3337**	**44.8349**	**0.0854**		**4.1597**	**4.1597**		**4.1597**	**4.1597**	**589.3162**	**932.8356**	**1,522.1518**	**2.8073**	**0.0164**	**1,597.2350**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0822	0.7025	0.2989	4.4800e-003		0.0568	0.0568		0.0568	0.0568	0.0000	896.8235	896.8235	0.0172	0.0164	902.1529
Landscaping	0.6127	0.2320	20.0610	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0121	36.0121	0.0352		36.8926
Total	**13.4024**	**0.9345**	**20.3599**	**5.5400e-003**		**0.1671**	**0.1671**		**0.1671**	**0.1671**	**0.0000**	**932.8356**	**932.8356**	**0.0524**	**0.0164**	**939.0455**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Westport

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	148.04	1000sqft	3.40	148,040.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	248,000.00	252
Apartments Mid Rise	115.00	Dwelling Unit	3.03	193,500.00	329
Retirement Community	39.00	Dwelling Unit	7.80	38,800.00	112
Strip Mall	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Matches DEIR's model. See SWAPE comment about parking garage.

Construction Phase - Matches DEIR's model.

Grading -

Demolition - Matches DEIR's model.

Vehicle Trips - Matches DEIR's model.

Woodstoves - Matches DEIR's model.

Construction Off-road Equipment Mitigation - See SWAPE comment about construction mitigation measures.

Mobile Land Use Mitigation - See SWAPE comment about mobile mitigation measures.

Area Mitigation -

Water Mitigation - Matches DEIR's model.

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	109.00
tblConstructionPhase	NumDays	370.00	381.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	35.00	88.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	10/26/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	8/31/2020	12/31/2020
tblConstructionPhase	PhaseEndDate	1/28/2019	1/30/2019
tblConstructionPhase	PhaseEndDate	4/1/2019	6/17/2019
tblConstructionPhase	PhaseEndDate	9/28/2020	7/17/2019
tblConstructionPhase	PhaseEndDate	2/11/2019	2/13/2019
tblConstructionPhase	PhaseStartDate	9/29/2020	8/1/2020

tblConstructionPhase	PhaseStartDate	4/2/2019	7/18/2019
tblConstructionPhase	PhaseStartDate	2/12/2019	2/14/2019
tblConstructionPhase	PhaseStartDate	9/1/2020	6/18/2019
tblConstructionPhase	PhaseStartDate	1/29/2019	1/31/2019
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	19.55	0.00
tblFireplaces	NumberWood	6.63	0.00
tblGrading	MaterialExported	0.00	69,000.00
tblLandUse	LandUseSquareFeet	88,000.00	248,000.00
tblLandUse	LandUseSquareFeet	115,000.00	193,500.00
tblLandUse	LandUseSquareFeet	39,000.00	38,800.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	SU_TR	6.07	6.76
tblVehicleTrips	SU_TR	5.86	5.02
tblVehicleTrips	SU_TR	1.95	3.31
tblVehicleTrips	SU_TR	20.43	31.65
tblVehicleTrips	WD_TR	6.59	7.32
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	2.40	3.73
tblVehicleTrips	WD_TR	44.32	37.75

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.6953	84.4564	39.8173	0.1423	18.2141	2.4999	20.6054	9.9699	2.3041	12.1699	0.0000	14,690.7429	14,690.7429	2.3290	0.0000	14,748.9669
2020	68.3869	28.3999	29.0533	0.0721	2.9924	1.2783	4.2707	0.8031	1.2088	2.0119	0.0000	7,142.2944	7,142.2944	0.7845	0.0000	7,161.9078
Maximum	**68.3869**	**84.4564**	**39.8173**	**0.1423**	**18.2141**	**2.4999**	**20.6054**	**9.9699**	**2.3041**	**12.1699**	**0.0000**	**14,690.7429**	**14,690.7429**	**2.3290**	**0.0000**	**14,748.9669**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.6953	84.4564	39.8173	0.1423	18.2141	2.4999	20.6054	9.9699	2.3041	12.1699	0.0000	14,690.7429	14,690.7429	2.3290	0.0000	14,748.9669
2020	68.3869	28.3999	29.0533	0.0721	2.9924	1.2783	4.2707	0.8031	1.2088	2.0119	0.0000	7,142.2944	7,142.2944	0.7845	0.0000	7,161.9078
Maximum	**68.3869**	**84.4564**	**39.8173**	**0.1423**	**18.2141**	**2.4999**	**20.6054**	**9.9699**	**2.3041**	**12.1699**	**0.0000**	**14,690.7429**	**14,690.7429**	**2.3290**	**0.0000**	**14,748.9669**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	16.0975	1.3337	44.8349	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8356	1,522.1518	2.8073	0.0164	1,597.2350
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.9810	13.7500	41.3695	0.1295	10.9218	0.1225	11.0443	2.9155	0.1149	3.0304		13,039.6480	13,039.6480	0.4571		13,051.0763
Total	**20.1474**	**15.6744**	**86.4610**	**0.2186**	**10.9218**	**4.3299**	**15.2517**	**2.9155**	**4.3223**	**7.2378**	**589.3162**	**14,725.4863**	**15,314.8025**	**3.2789**	**0.0303**	**15,405.7887**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.4024	0.9345	20.3599	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8356	932.8356	0.0524	0.0164	939.0455
Energy	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
Mobile	3.7485	12.2330	34.9156	0.1053	8.7374	0.1008	8.8382	2.3324	0.0945	2.4269		10,611.3864	10,611.3864	0.3891		10,621.1126
Total	**17.2199**	**13.7581**	**55.5321**	**0.1146**	**8.7374**	**0.3156**	**9.0530**	**2.3324**	**0.3093**	**2.6417**	**0.0000**	**12,297.2246**	**12,297.2246**	**0.4559**	**0.0303**	**12,317.6355**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**14.53**	**12.23**	**35.77**	**47.56**	**20.00**	**92.71**	**40.64**	**20.00**	**92.84**	**63.50**	**100.00**	**16.49**	**19.70**	**86.10**	**0.00**	**20.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	
2	Site Preparation	Site Preparation	1/31/2019	2/13/2019	5	10	
3	Grading	Grading	2/14/2019	6/17/2019	5	88	
4	Building Construction	Building Construction	7/18/2019	12/31/2020	5	381	
5	Paving	Paving	6/18/2019	7/17/2019	5	22	
6	Architectural Coating	Architectural Coating	8/1/2020	12/31/2020	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 220

Acres of Paving: 4.45

Residential Indoor: 972,608; Residential Outdoor: 324,203; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000; Striped Parking Area: 11,690 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	324.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	8,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	262.00	61.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1881	0.0000	3.1881	0.4827	0.0000	0.4827			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**3.1881**	**1.7949**	**4.9830**	**0.4827**	**1.6697**	**2.1524**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1323	4.4910	0.8758	0.0118	0.2574	0.0175	0.2748	0.0705	0.0167	0.0872		1,259.8364	1,259.8364	0.0574		1,261.2707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.1893**	**4.5272**	**1.3348**	**0.0131**	**0.3806**	**0.0183**	**0.3988**	**0.1032**	**0.0174**	**0.1206**		**1,384.6331**	**1,384.6331**	**0.0608**		**1,386.1519**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1881	0.0000	3.1881	0.4827	0.0000	0.4827			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**3.1881**	**1.7949**	**4.9830**	**0.4827**	**1.6697**	**2.1524**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1323	4.4910	0.8758	0.0118	0.2574	0.0175	0.2748	0.0705	0.0167	0.0872		1,259.8364	1,259.8364	0.0574		1,261.2707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.1893**	**4.5272**	**1.3348**	**0.0131**	**0.3806**	**0.0183**	**0.3988**	**0.1032**	**0.0174**	**0.1206**		**1,384.6331**	**1,384.6331**	**0.0608**		**1,386.1519**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0435	0.5508	1.5000e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		149.7561	149.7561	4.0500e-003		149.8574
Total	**0.0685**	**0.0435**	**0.5508**	**1.5000e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**149.7561**	**149.7561**	**4.0500e-003**		**149.8574**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0435	0.5508	1.5000e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		149.7561	149.7561	4.0500e-003		149.8574
Total	**0.0685**	**0.0435**	**0.5508**	**1.5000e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**149.7561**	**149.7561**	**4.0500e-003**		**149.8574**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7620	0.0000	8.7620	3.6099	0.0000	3.6099			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.7620**	**2.3827**	**11.1447**	**3.6099**	**2.1920**	**5.8020**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8803	29.8879	5.8286	0.0787	1.7128	0.1162	1.8289	0.4694	0.1111	0.5805		8,384.3278	8,384.3278	0.3818		8,393.8733
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0484	0.6120	1.6700e-003	0.1643	1.0500e-003	0.1653	0.0436	9.6000e-004	0.0445		166.3956	166.3956	4.5000e-003		166.5083
Total	**0.9564**	**29.9362**	**6.4405**	**0.0803**	**1.8771**	**0.1172**	**1.9943**	**0.5130**	**0.1121**	**0.6251**		**8,550.7234**	**8,550.7234**	**0.3863**		**8,560.3815**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.7620	0.0000	8.7620	3.6099	0.0000	3.6099			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.7620**	**2.3827**	**11.1447**	**3.6099**	**2.1920**	**5.8020**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8803	29.8879	5.8286	0.0787	1.7128	0.1162	1.8289	0.4694	0.1111	0.5805		8,384.3278	8,384.3278	0.3818		8,393.8733
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0761	0.0484	0.6120	1.6700e-003	0.1643	1.0500e-003	0.1653	0.0436	9.6000e-004	0.0445		166.3956	166.3956	4.5000e-003		166.5083
Total	**0.9564**	**29.9362**	**6.4405**	**0.0803**	**1.8771**	**0.1172**	**1.9943**	**0.5130**	**0.1121**	**0.6251**		**8,550.7234**	**8,550.7234**	**0.3863**		**8,560.3815**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2939	7.5952	1.9461	0.0169	0.4130	0.0550	0.4680	0.1189	0.0526	0.1715		1,787.5267	1,787.5267	0.0848		1,789.6473
Worker	0.9963	0.6333	8.0166	0.0219	2.1523	0.0137	2.1660	0.5709	0.0126	0.5835		2,179.7827	2,179.7827	0.0590		2,181.2580
Total	**1.2902**	**8.2285**	**9.9627**	**0.0388**	**2.5652**	**0.0687**	**2.6340**	**0.6898**	**0.0653**	**0.7550**		**3,967.3094**	**3,967.3094**	**0.1438**		**3,970.9054**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2939	7.5952	1.9461	0.0169	0.4130	0.0550	0.4680	0.1189	0.0526	0.1715		1,787.5267	1,787.5267	0.0848		1,789.6473
Worker	0.9963	0.6333	8.0166	0.0219	2.1523	0.0137	2.1660	0.5709	0.0126	0.5835		2,179.7827	2,179.7827	0.0590		2,181.2580
Total	**1.2902**	**8.2285**	**9.9627**	**0.0388**	**2.5652**	**0.0687**	**2.6340**	**0.6898**	**0.0653**	**0.7550**		**3,967.3094**	**3,967.3094**	**0.1438**		**3,970.9054**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2370	6.8598	1.7373	0.0168	0.4130	0.0342	0.4472	0.1189	0.0327	0.1516		1,776.9232	1,776.9232	0.0780		1,778.8720
Worker	0.9107	0.5592	7.2059	0.0212	2.1523	0.0134	2.1657	0.5709	0.0124	0.5833		2,111.7368	2,111.7368	0.0517		2,113.0287
Total	**1.1477**	**7.4190**	**8.9432**	**0.0380**	**2.5653**	**0.0476**	**2.6128**	**0.6898**	**0.0451**	**0.7348**		**3,888.6599**	**3,888.6599**	**0.1296**		**3,891.9007**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2370	6.8598	1.7373	0.0168	0.4130	0.0342	0.4472	0.1189	0.0327	0.1516		1,776.9232	1,776.9232	0.0780		1,778.8720
Worker	0.9107	0.5592	7.2059	0.0212	2.1523	0.0134	2.1657	0.5709	0.0124	0.5833		2,111.7368	2,111.7368	0.0517		2,113.0287
Total	**1.1477**	**7.4190**	**8.9432**	**0.0380**	**2.5653**	**0.0476**	**2.6128**	**0.6898**	**0.0451**	**0.7348**		**3,888.6599**	**3,888.6599**	**0.1296**		**3,891.9007**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.0570**	**0.0363**	**0.4590**	**1.2500e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.2000e-004**	**0.0334**		**124.7967**	**124.7967**	**3.3800e-003**		**124.8812**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5795**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0363	0.4590	1.2500e-003	0.1232	7.9000e-004	0.1240	0.0327	7.2000e-004	0.0334		124.7967	124.7967	3.3800e-003		124.8812
Total	**0.0570**	**0.0363**	**0.4590**	**1.2500e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.2000e-004**	**0.0334**		**124.7967**	**124.7967**	**3.3800e-003**		**124.8812**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.6964					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**64.9386**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1808	0.1110	1.4302	4.2100e-003	0.4272	2.6600e-003	0.4298	0.1133	2.4500e-003	0.1158		419.1233	419.1233	0.0103		419.3798
Total	**0.1808**	**0.1110**	**1.4302**	**4.2100e-003**	**0.4272**	**2.6600e-003**	**0.4298**	**0.1133**	**2.4500e-003**	**0.1158**		**419.1233**	**419.1233**	**0.0103**		**419.3798**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.6964					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**64.9386**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1808	0.1110	1.4302	4.2100e-003	0.4272	2.6600e-003	0.4298	0.1133	2.4500e-003	0.1158		419.1233	419.1233	0.0103		419.3798
Total	**0.1808**	**0.1110**	**1.4302**	**4.2100e-003**	**0.4272**	**2.6600e-003**	**0.4298**	**0.1133**	**2.4500e-003**	**0.1158**		**419.1233**	**419.1233**	**0.0103**		**419.3798**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7485	12.2330	34.9156	0.1053	8.7374	0.1008	8.8382	2.3324	0.0945	2.4269		10,611.3864	10,611.3864	0.3891		10,621.1126
Unmitigated	3.9810	13.7500	41.3695	0.1295	10.9218	0.1225	11.0443	2.9155	0.1149	3.0304		13,039.6480	13,039.6480	0.4571		13,051.0763

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	644.16	630.08	594.88	1,466,851	1,173,481
Apartments Mid Rise	625.60	734.85	577.30	1,465,000	1,172,000
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	145.47	79.17	129.09	308,699	246,959
Strip Mall	755.00	840.80	633.00	1,464,485	1,171,588
Total	2,170.23	2,284.90	1,934.27	4,705,036	3,764,028

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	60	40	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Apartments Mid Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774
NaturalGas Unmitigated	0.0690	0.5906	0.2566	3.7700e-003		0.0477	0.0477		0.0477	0.0477		753.0026	753.0026	0.0144	0.0138	757.4774

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2458.9	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2722.02	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1089.74	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	129.863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2.4589	0.0265	0.2266	0.0964	1.4500e-003		0.0183	0.0183		0.0183	0.0183		289.2825	289.2825	5.5400e-003	5.3000e-003	291.0015
Apartments Mid Rise	2.72202	0.0294	0.2509	0.1068	1.6000e-003		0.0203	0.0203		0.0203	0.0203		320.2375	320.2375	6.1400e-003	5.8700e-003	322.1405
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	1.08974	0.0118	0.1004	0.0427	6.4000e-004		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003		128.2047	128.2047	2.4600e-003	2.3500e-003	128.9666
Strip Mall	0.129863	1.4000e-003	0.0127	0.0107	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004		15.2780	15.2780	2.9000e-004	2.8000e-004	15.3688
Total		**0.0690**	**0.5906**	**0.2566**	**3.7700e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**753.0026**	**753.0026**	**0.0144**	**0.0138**	**757.4774**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.4024	0.9345	20.3599	5.5400e-003		0.1671	0.1671		0.1671	0.1671	0.0000	932.8356	932.8356	0.0524	0.0164	939.0455
Unmitigated	16.0975	1.3337	44.8349	0.0854		4.1597	4.1597		4.1597	4.1597	589.3162	932.8356	1,522.1518	2.8073	0.0164	1,597.2350

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.7773	1.1018	24.7739	0.0843		4.0495	4.0495		4.0495	4.0495	589.3162	896.8235	1,486.1397	2.7721	0.0164	1,560.3425
Landscaping	0.6127	0.2320	20.0610	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0121	36.0121	0.0352		36.8926
Total	**16.0975**	**1.3337**	**44.8349**	**0.0854**		**4.1597**	**4.1597**		**4.1597**	**4.1597**	**589.3162**	**932.8356**	**1,522.1518**	**2.8073**	**0.0164**	**1,597.2350**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.7754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0822	0.7025	0.2989	4.4800e-003		0.0568	0.0568		0.0568	0.0568	0.0000	896.8235	896.8235	0.0172	0.0164	902.1529
Landscaping	0.6127	0.2320	20.0610	1.0600e-003		0.1103	0.1103		0.1103	0.1103		36.0121	36.0121	0.0352		36.8926
Total	**13.4024**	**0.9345**	**20.3599**	**5.5400e-003**		**0.1671**	**0.1671**		**0.1671**	**0.1671**	**0.0000**	**932.8356**	**932.8356**	**0.0524**	**0.0164**	**939.0455**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EXHIBIT B

SMITH ENGINEERING & MANAGEMENT

December 20, 2019

Mr. Aaron Messing
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

Subject: Westport Mixed Use Project DEIR (SCH 2019070377)

P19052

Dear Mr. Messing:

Per your request, I reviewed the Draft Environmental Impact Report (the "DEIR") for the Westport Mixed Use Project, located in Cupertino (the "City"). My review is specific to the Transportation and Circulation matters. B5-51

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and parking field. I have both prepared and reviewed the transportation and circulation sections of CEQA environmental review documents. My professional resume is attached hereto.

My technical comments follow.

The DEIR Project Description is Incomplete

The DEIR's project description does not include any discussion of the types of retail that would be included in the Project. The existing shopping plaza, which contains many local serving uses like cheap restaurants, dentists, nail shops, and dance studios, attracts considerably more local trips than a shopping center that has specialty shops that people drive for longer distances to get to. These differences in retail may significantly increase the VMT and GHG impacts of the project and without more information, the DEIR cannot make reliable conclusions as to those impacts. Please confirm what elements of local data and what default data were used in the VMT analysis. B5-52

The DEIR Makes No Evident Assumption of Development on the Vallco Site.

At the time of issuance of the Notice Of Preparation (NOP) for the Westport EIR (July 11, 2019), the Cupertino City Council had repealed the Vallco General Plan Amendment, B5-53 the Specific Plan and the Development agreement that had previously been adopted by the Council in September, 2018. Resolution No. 18-104 certifying the Final EIR on the Vallco site has not been subsequently repealed. While the repeal actions make certain that the Specific Plan in its proposed form will not move forward, this does not mean Vallco will remain in its substantially vacant current condition, a condition that prevailed at the time the traffic counts the Westport Project DEIR were taken. It does, however, make more likely that an alternative studied in the Vallco EIR, the Occupied / Re-tenanted Mall, would become the long term use. That option, would, according to the Vallco DEIR, involve 23,417 net new trips daily, including 307 in the AM peak and 2,398 in the PM peak hour that were not present when the counts supporting the Westport DEIR analysis were conducted. These are a sufficient number of trips generated close to the Westport site to alter the findings of the Westport traffic analysis. It is not clear that the Westport analysis has accounted for any revitalized use of the Vallco site. B5-53 continued

The Summary Reporting of the VMT Analysis Raises Questions

The DEIR discloses that the Project's vehicle miles traveled generation (VMT) was analyzed using the CAEEMOD, an air pollutant prediction model, and that the Project would reduce VMT generated by development at the site by 120,000 miles annually or 327 per day, as compared to a continuation of the existing use of the site. This seems logical in that the small reduction in the net daily trips generated at the site would be expected to reduce VMT by a small number of miles per day. B5-54

However, neither the Transportation section of the DEIR nor its Appendix H Transportation Analysis presents the CAEEMOD run sheets for inspection. All that is presented is a summarization of the model outcomes with respect to VMT. Since CAEEMOD is known to have generalized default values for trip generation and average trip length for various land uses for which superior current and local values for trip generation and average trip length can be substituted, it is important for the public to understand whether data from local traffic models has been employed or the outcome is just the product of default values. The must clarify whether local values have been substituted for default values and if not, why not. We do note that there are CAEEMOD run sheets located in Appendix C and that the weekday trip generation in them appears to be consistent with the trip generation analysis contained in the transportation section. However, other aspects like trip length or trip purpose may be default values.

Conclusion

This completes my current comments on the Westport Mixed Use Project DEIR. For the reasons stated above, the DEIR is inadequate and must be revised and recirculated in draft status. B5-55

Sincerely,

Smith Engineering & Management
A California Corporation

REGISTERED PROFESSIONAL ENGINEER
DANIEL T SMITH, JR.
No. 0938
Exp. 6-30-20
TRAFFIC
STATE OF CALIFORNIA

Dan Smith Jr

Daniel T. Smith Jr., P.E.
President

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil)
Nevada No. 7969 (Civil, Ret.)
Washington No. 29337 (Civil, Ret.)
California No. 938 (Traffic)
Arizona No. 22131 (Civil, Ret.)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.). Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers   Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Homburger *et al.* Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

Residential Traffic Management, State of the Art Report, U.S. Department of Transportation, 1979.

Improving The Residential Street Environment, with Donald Appleyard et al., U.S. Department of Transportation, 1979.

Strategic Concepts in Residential Neighborhood Traffic Control, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

Planning and Design of Bicycle Facilities: Pitfalls and New Directions, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

Comment Letter B6

To: Gian Martire, Senior Planner
City of Cupertino
10300 Torre Avenue
Cupertino, CA 95014
Phone: (408) 777-3319
Email: GianM@cupertino.org

Subject: The Westport Mixed-Use Project Draft EIR public comment (SCH#2019070377)

To Mr. Gian Martire:

Overall the Initial Study (IS) and Environmental Impact Report (EIR) for the Westport Mixed-Use Project is well written from a CEQA standpoint. I mostly have non-CEQA questions and comments for the City as a whole and some more project-related information seeking comments/questions. B6-1

Schools

Cupertino is a residential city with pockets of office spaces. CUSD is one of the largest school districts in Northern California. Even though we are in a highly affluent area, the high enrollment coupled with the low-incoming enrollment due primarily to the high-cost of living and home prices is causing financial difficulties and skewed enrollment at schools for CUSD (some school enrollment is super high, others it's dwindling due to low incoming enrollment). Will this project help the CUSD problem or make it worse? Even though the developer pays developer fees to CUSD, there is a cap on the amount of fees CUSD can acquire due to SB 50. It doesn't look like the City of Cupertino has any significant goals or policies in the General Plan to encourage more collaboration with CUSD or FUHSD when it comes to development. B6-2

Parking

The only definitive mention of parking is for bicycle parking (117 bicycle parking spaces). A single-level underground parking lot is mentioned along with density bonuses and such which are factored into the total parking spaces. There is no mention of the total number of parking spaces proposed. There is no discussion on Parking. Although not a CEQA-specific issue per se, this is a concern. Will there be enough spaces for the 242 residential units? There are 88 units (19 rowhouses and 69 townhomes) that will have their own garage. This brings the number of units using the underground parking to 154 residential units. Will there be enough parking provided for the proposed residential units on-site? How many parking spaces are proposed? B6-3

Traffic and Pedestrians along Mary Avenue

There is an existing blind curve on Mary Avenue where there is an existing pedestrian crosswalk with a signal. With this project, traffic will increase and only exacerbate safety issues for those crossing Mary Ave. Will this signalized pedestrian crossing be maintained or improved? B6-4

Traffic along Stevens Creek Boulevard

Currently, during morning hours (especially during the hours to take school-aged children to school between 7:45 a.m. and 9:00 a.m.), there is a backup along westbound Stevens Creek Boulevard. There is an existing exit lane to the freeway-onramp which becomes congested when vehicles try to turn right onto Stevens Creek Boulevard through lanes (the first and second lanes). What traffic calming measures B6-5 will be implemented to help ease this existing congestion? Development of this project would increase traffic along this roadway. Is there space along Mary Avenue to have two right turn lanes onto Stevens Creek Boulevard? One right turn lane for through traffic and one right turn lane for freeway-onramp only traffic that could be utilized specifically during the morning hours? B6-5 continued

Thanks,

Michelle Dunn
106xx Hale Place
Cupertino, CA 95014

APPENDIX B:
AIR QUALITY AND GREENHOUSE GAS EMISSIONS

MEMORANDUM

To: Gian Martire, Senior Planner, City of Cupertino

From: Ace Malisos, Air Quality and Noise Manager, Kimley-Horn
Noemi Wyss AICP, Environmental Analyst, Kimley-Horn

Date: April 2, 2020

Subject: Westport Mixed-Use Project – Alternative Proposal Comparison: Air Quality and Greenhouse Gas Emissions

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1.0 PURPOSE

The purpose of this memorandum is to identify the air quality and greenhouse gas (GHG) emissions associated with operations of the Westport Mixed-Use Project (project) Alternative Proposal, located in the City of Cupertino, California. This comparative analysis has been undertaken to analyze whether the Alternative Proposal would result in any new or substantially more severe significant environmental impacts as compared to the conclusions discussed in the certified Draft Environmental Impact Report (EIR) for the Westport Mixed-Use Project.

2.0 PROPOSED PROJECT DESCRIPTION

The proposed Project is in the City of Cupertino (City) in Santa Clara County, California. The project is located adjacent to SR-85 and Stevens Creek Boulevard on approximately 8.1 acres. The existing site is 71,254 square feet of shopping center use (The Oaks), which includes specialty restaurants, retailers, and other commercial space.

The Alternative Proposal would demolish the existing buildings and construct a mixed-use urban village with 88 low-rise multifamily residential units, 39 senior residential units, 140 assisted living units, and 27 life guidance/memory care units, 8,040 square feet of general retail and 2,140 square feet of medical office. The follow section provides a comparison between the original proposal and the alternative proposal, based on the March 17, 2020 site plans.

3.0 Air Quality

Construction Emissions

Construction associated with the Alternative Proposal would result is less building area than what was analyzed with the proposed project in the Draft EIR. Therefore, construction emissions would be the same or less than the emissions associated with the proposed project.

Operational Emissions

Operational emissions for mixed-use developments are typically generated from mobile sources (burning of fossil fuels in cars); energy sources (cooling, heating, and cooking); and area sources (landscape equipment and household products). **Table 1: Operational Emissions (Alternative Proposal)** shows that the Alternative Proposal's annual and daily emissions would not exceed BAAQMD operational thresholds.

Table 1: Operational Emissions (Alternative Proposal)

Emission Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Exhaust		Fugitive	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Annual Emissions (maximum tons per year)						
Area Source Emissions	1.96	0.03	0.01	0.01	--	--
Energy Emissions	0.02	0.14	0.01	0.01	--	--
Mobile Emissions[1]	0.43	1.83	0.02	0.02	1.47	0.39
Total Project Emissions	2.40	2.01	0.04	0.04	1.47	0.39
BAAQMD Threshold[1]	*10*	*10*	*15*	*10*	*N/A*	*N/A*
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**
Average Daily Emissions (pounds)						
Area Source Emissions	10.75	0.19	0.07	0.07	--	--
Energy Emissions	0.09	0.77	0.06	0.06	--	--
Mobile Emissions[1]	2.34	10.04	0.09	0.09	8.05	2.16
Total Project Emissions	13.17	11.01	0.22	0.22	8.05	2.16
BAAQMD Threshold[2]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

Notes:
1. Mobile emissions conservatively represent emissions associated with the full project (i.e., 1,462 daily vehicle trips), and do not take credit/trip reductions for the existing uses.
2. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, 2017.
Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality Modeling Data*.

Table 2: Operational Emissions (Original Proposal) shows the operational air quality emissions associated with the original proposal as analyzed in the Draft EIR. The project's annual and daily emissions would not exceed BAAQMD operational thresholds.

Table 2: Operational Emissions (Original Proposal)

Emission Source	**Reactive Organic Gases (ROG)**	**Nitrogen Oxide (NO_X)**	**Exhaust**		**Fugitive**	
			Coarse Particulate Matter (PM_{10})	**Fine Particulate Matter ($PM_{2.5}$)**	**Coarse Particulate Matter (PM_{10})**	**Fine Particulate Matter ($PM_{2.5}$)**
Annual Emissions (maximum tons per year)						
Area Source Emissions	2.39	0.03	0.04	0.04	--	--
Energy Emissions	0.01	0.11	0.01	0.01	--	--
Mobile Emissions[1]	0.55	2.24	0.02	0.02	1.61	0.43
Total Project Unmitigated Emissions	2.96	2.38	0.07	0.06	1.61	0.43
BAAQMD Threshold[1]	*10*	*10*	*15*	*10*	*N/A*	*N/A*
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**
Average Daily Emissions (pounds)						
Area Source Emissions	13.09	0.15	0.21	0.21	--	--
Energy Emissions	0.07	0.59	0.05	0.05	--	--
Mobile Emissions[1]	3.04	12.27	0.10	0.10	8.84	2.37
Total Project Unmitigated Emissions	16.20	13.02	0.36	0.36	8.84	2.37
BAAQMD Threshold[2]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

Notes:
1. Mobile emissions conservatively represent emissions associated with the full project (i.e., 2,174 daily vehicle trips), and do not take credit/trip reductions for the existing uses.
2. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, 2017.

Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality Modeling Data*.

Table 3: Operational Air Quality Comparison shows a comparison between the original project and the Alternative Proposal. The Alternative Proposal would have less emissions than the original project that was analyzed in the Draft EIR.

Table 3: Operational Air Quality Comparison

Emission Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Exhaust		Fugitive	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Annual Emissions (maximum tons per year)						
Total Project Emissions (Alternative)	2.40	2.01	0.04	0.04	1.47	0.39
Total Project Emissions (Original)	2.96	2.38	0.07	0.06	1.61	0.43
Net Change	**-0.56**	**-0.37**	**-0.03**	**-0.02**	**-0.14**	**-0.04**
Average Daily Emissions (pounds)						
Total Project Emissions (Alternative)	13.17	11.01	0.22	0.22	8.05	2.16
Total Project Emissions (Original)	16.20	13.02	0.36	0.36	8.84	2.37
Net Change	**-3.03**	**-2.01**	**-0.14**	**-0.14**	**-0.79**	**-0.21**

Notes:
1. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, 2017.
Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality Modeling Data*.

4.0 Greenhouse Gas Emissions

Construction Emissions Greenhouse Gas Emissions

Construction associated with the alternative site plan would result is less building area than what was analyzed with the proposed project in the Draft EIR. Therefore, construction GHG emissions would not exceed what was evaluated for the previously approved project.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions would occur over the project's lifetime. GHG emissions would result from direct emissions such as project generated vehicular traffic, on-site combustion of natural gas, and operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power over the life of the project, the energy required to convey water to, and wastewater from the project site, the emissions associated with solid waste generated from the Project site, and any fugitive refrigerants from air conditioning or refrigerators. **Table 4: Operational GHG Emissions**, summarizes the total GHG emissions associated with the original project and the Alternative Proposal. **Table 4** shows that the Alternative Proposal would have similar operational GHG emissions compared to the original project and would not exceed the BAAQMD's threshold. The change in emissions would remain less than significant and would not require additional mitigation.

Table 4: Operational GHG Emissions

Emissions Source	**$MTCO_2e^{1,2,3}$**				
	Existing	**Original Project**	**Original Project – Existing**	**Alternative Proposal**	**Alternative Proposal – Existing**
Area	<1	8	8	15	15
Energy	232	648	416	804	572
Mobile	1,214	1,102	-112	951	-263
Waste	19	33	14	42	23
Water	19	51	32	59	40
Total Annual Project GHG Emissions	**1,484**	**1,843**	**359**	**1,871**	**387**
Net Project Alternative GHG Emissions	NA	**359**	NA	**387**	NA
Threshold	NA	1,100	NA	1,100	NA
Exceeds Threshold?	NA	**No**	NA	**No**	NA

1. Emissions were calculated using CalEEMod version 2016.3.2.
2. Emissions may not total due to rounding.
3. Emissions conservatively assume energy would be procured from traditional sources and do not take credit for emissions reductions from energy procured from the Silicon Valley Clean Energy Community Choice Aggregator.

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Appendix A

Air Quality and GHG Data

Westport Alternative Proposal

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	232.00	Space	2.09	129,490.00	0
Parking Lot	117.00	Space	1.05	46,800.00	0
Apartments Low Rise	88.00	Dwelling Unit	5.50	187,735.00	252
Retirement Community	206.00	Dwelling Unit	41.20	209,871.00	420
Strip Mall	8.04	1000sqft	0.18	8,040.00	0
Medical Office Building	2.14	1000sqft	0.05	2,140.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on information from applicant

Land Use - Based on applicants information
Low Rise: Townhomes and Rowhomes

Construction Phase - No construction run

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Anticipated equipment

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition - Operation only run

Grading - Operational run only

Architectural Coating -

Vehicle Trips - Based on Trip Generation Table

Woodstoves - Prohibited per BAAQMD Regulation 6, Rule 3.

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - No construction, operational only

Mobile Land Use Mitigation - Assisted-Living conservatively assume two beds per unit

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - per AB 939

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	70.00	0.00
tblConstructionPhase	NumDays	40.00	0.00
tblConstructionPhase	NumDays	110.00	0.00
tblConstructionPhase	NumDays	75.00	0.00
tblConstructionPhase	NumDays	1,110.00	0.00

tblConstructionPhase	NumDays	75.00	0.00
tblConstructionPhase	PhaseEndDate	10/15/2020	7/9/2020
tblConstructionPhase	PhaseEndDate	12/10/2020	10/15/2020
tblConstructionPhase	PhaseEndDate	5/13/2021	12/10/2020
tblConstructionPhase	PhaseEndDate	11/27/2025	8/14/2020
tblConstructionPhase	PhaseEndDate	8/14/2025	5/13/2020
tblConstructionPhase	PhaseEndDate	3/12/2026	11/27/2020
tblConstructionPhase	PhaseStartDate	8/15/2025	8/15/2020
tblConstructionPhase	PhaseStartDate	5/14/2021	5/14/2020
tblConstructionPhase	PhaseStartDate	11/28/2025	11/28/2020
tblFireplaces	NumberGas	13.20	88.00
tblFireplaces	NumberGas	30.90	0.00
tblFireplaces	NumberWood	14.96	0.00
tblFireplaces	NumberWood	35.02	0.00
tblLandUse	LandUseSquareFeet	92,800.00	129,490.00
tblLandUse	LandUseSquareFeet	88,000.00	187,735.00
tblLandUse	LandUseSquareFeet	206,000.00	209,871.00
tblLandUse	Population	589.00	420.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	60.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00

tblVehicleTrips	ST_TR	7.16	7.09
tblVehicleTrips	ST_TR	8.96	28.04
tblVehicleTrips	ST_TR	2.03	2.71
tblVehicleTrips	ST_TR	42.04	31.34
tblVehicleTrips	SU_TR	6.07	7.09
tblVehicleTrips	SU_TR	1.55	28.04
tblVehicleTrips	SU_TR	1.95	2.71
tblVehicleTrips	SU_TR	20.43	31.34
tblVehicleTrips	WD_TR	6.59	7.09
tblVehicleTrips	WD_TR	36.13	28.04
tblVehicleTrips	WD_TR	2.40	2.71
tblVehicleTrips	WD_TR	44.32	31.34
tblWoodstoves	NumberCatalytic	1.76	0.00
tblWoodstoves	NumberCatalytic	4.12	0.00
tblWoodstoves	NumberNoncatalytic	1.76	0.00
tblWoodstoves	NumberNoncatalytic	4.12	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9610	0.0349	2.1976	1.8000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	14.5581	14.5581	3.7000e-003	2.0000e-004	14.7108
Energy	0.0165	0.1408	0.0610	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	800.7282	800.7282	0.0320	8.9500e-003	804.1955
Mobile	0.4268	1.8330	5.2522	0.0168	1.4695	0.0167	1.4862	0.3934	0.0157	0.4091	0.0000	1,533.7863	1,533.7863	0.0542	0.0000	1,535.1414

Waste						0.0000	0.0000		0.0000	0.0000	33.8569	0.0000	33.8569	2.0009	0.0000	83.8789
Water						0.0000	0.0000		0.0000	0.0000	6.3512	44.2325	50.5837	0.6543	0.0158	71.6553
Total	**2.4042**	**2.0087**	**7.5109**	**0.0179**	**1.4695**	**0.0409**	**1.5104**	**0.3934**	**0.0399**	**0.4333**	**40.2081**	**2,393.3052**	**2,433.5132**	**2.7451**	**0.0250**	**2,509.5819**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9610	0.0349	2.1976	1.8000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	14.5581	14.5581	3.7000e-003	2.0000e-004	14.7108
Energy	0.0165	0.1408	0.0610	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	800.7282	800.7282	0.0320	8.9500e-003	804.1955
Mobile	0.3631	1.3783	3.6501	0.0104	0.8748	0.0106	0.8855	0.2342	9.9700e-003	0.2442	0.0000	949.7370	949.7370	0.0378	0.0000	950.6808
Waste						0.0000	0.0000		0.0000	0.0000	16.9284	0.0000	16.9284	1.0004	0.0000	41.9395
Water						0.0000	0.0000		0.0000	0.0000	5.0810	37.1540	42.2350	0.5235	0.0127	59.0992
Total	**2.3406**	**1.5540**	**5.9087**	**0.0115**	**0.8748**	**0.0348**	**0.9097**	**0.2342**	**0.0342**	**0.2684**	**22.0094**	**1,802.1773**	**1,824.1868**	**1.5974**	**0.0218**	**1,870.6257**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**2.65**	**22.63**	**21.33**	**35.78**	**40.47**	**14.90**	**39.77**	**40.47**	**14.39**	**38.06**	**45.26**	**24.70**	**25.04**	**41.81**	**12.62**	**25.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/10/2020	7/9/2020	5	0	

2	Site Preparation	Site Preparation	10/16/2020	10/15/2020	5	0	
3	Grading	Grading	12/11/2020	12/10/2020	5	0	
4	Building Construction	Building Construction	5/14/2020	5/13/2020	5	0	
5	Paving	Paving	8/15/2020	8/14/2020	5	0	
6	Architectural Coating	Architectural Coating	11/28/2020	11/27/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.14

Residential Indoor: 805,152; Residential Outdoor: 268,384; Non-Residential Indoor: 15,270; Non-Residential Outdoor: 5,090; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	289.00	62.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	58.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3631	1.3783	3.6501	0.0104	0.8748	0.0106	0.8855	0.2342	9.9700e-003	0.2442	0.0000	949.7370	949.7370	0.0378	0.0000	950.6808
Unmitigated	0.4268	1.8330	5.2522	0.0168	1.4695	0.0167	1.4862	0.3934	0.0157	0.4091	0.0000	1,533.7863	1,533.7863	0.0542	0.0000	1,535.1414

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	623.92	623.92	623.92	1,622,906	966,166
Medical Office Building	60.01	60.01	60.01	173,670	103,391
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Retirement Community	558.26	558.26	558.26	1,452,115	864,489
Strip Mall	251.97	251.97	251.97	703,040	418,541
Total	1,494.16	1,494.16	1,494.16	3,951,731	2,352,587

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	100	0	0
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Medical Office Building	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Enclosed Parking Structure	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Retirement Community	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Strip Mall	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	637.8326	637.8326	0.0288	5.9700e-003	640.3318
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	637.8326	637.8326	0.0288	5.9700e-003	640.3318
NaturalGas Mitigated	0.0165	0.1408	0.0610	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	162.8956	162.8956	3.1200e-003	2.9900e-003	163.8636
NaturalGas Unmitigated	0.0165	0.1408	0.0610	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	162.8956	162.8956	3.1200e-003	2.9900e-003	163.8636

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Medical Office Building	35031.8	1.9000e-004	1.7200e-003	1.4400e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8694	1.8694	4.0000e-005	3.0000e-005	1.8805
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.10096e+006	0.0113	0.0968	0.0412	6.2000e-004		7.8300e-003	7.8300e-003		7.8300e-003	7.8300e-003	0.0000	112.1154	112.1154	2.1500e-003	2.0600e-003	112.7816
Strip Mall	19054.8	1.0000e-004	9.3000e-004	7.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0168	1.0168	2.0000e-005	2.0000e-005	1.0229
Total		**0.0165**	**0.1408**	**0.0610**	**9.0000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**162.8956**	**162.8956**	**3.1300e-003**	**2.9900e-003**	**163.8636**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	897499	4.8400e-003	0.0414	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8940	47.8940	9.2000e-004	8.8000e-004	48.1786
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Medical Office Building	35031.8	1.9000e-004	1.7200e-003	1.4400e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8694	1.8694	4.0000e-005	3.0000e-005	1.8805
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Retirement Community	2.10096e+006	0.0113	0.0968	0.0412	6.2000e-004		7.8300e-003	7.8300e-003		7.8300e-003	7.8300e-003	0.0000	112.1154	112.1154	2.1500e-003	2.0600e-003	112.7816
Strip Mall	19054.8	1.0000e-004	9.3000e-004	7.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0168	1.0168	2.0000e-005	2.0000e-005	1.0229
Total		**0.0165**	**0.1408**	**0.0610**	**9.0000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**162.8956**	**162.8956**	**3.1300e-003**	**2.9900e-003**	**163.8636**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664
Enclosed Parking Structure	734208	213.5896	9.6600e-003	2.0000e-003	214.4265
Medical Office Building	38156.2	11.1001	5.0000e-004	1.0000e-004	11.1436
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838
Retirement Community	935145	272.0445	0.0123	2.5500e-003	273.1104
Strip Mall	85947.6	25.0031	1.1300e-003	2.3000e-004	25.1011
Total		**637.8326**	**0.0288**	**5.9600e-003**	**640.3318**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	382694	111.3302	5.0300e-003	1.0400e-003	111.7664
Enclosed Parking Structure	734208	213.5896	9.6600e-003	2.0000e-003	214.4265
Medical Office Building	38156.2	11.1001	5.0000e-004	1.0000e-004	11.1436
Parking Lot	16380	4.7651	2.2000e-004	4.0000e-005	4.7838

Retirement Community	935145	272.0445	0.0123	2.5500e-003	273.1104
Strip Mall	85947.6	25.0031	1.1300e-003	2.3000e-004	25.1011
Total		**637.8326**	**0.0288**	**5.9600e-003**	**640.3318**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9610	0.0349	2.1976	1.8000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	14.5581	14.5581	3.7000e-003	2.0000e-004	14.7108
Unmitigated	1.9610	0.0349	2.1976	1.8000e-004		0.0128	0.0128		0.0128	0.0128	0.0000	14.5581	14.5581	3.7000e-003	2.0000e-004	14.7108

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	1.6040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1100e-003	9.4900e-003	4.0400e-003	6.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	10.9859	10.9859	2.1000e-004	2.0000e-004	11.0511
Landscaping	0.0670	0.0254	2.1936	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5723	3.5723	3.4900e-003	0.0000	3.6596
Total	**1.9610**	**0.0349**	**2.1976**	**1.8000e-004**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**14.5581**	**14.5581**	**3.7000e-003**	**2.0000e-004**	**14.7108**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2889					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6040					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1100e-003	9.4900e-003	4.0400e-003	6.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	10.9859	10.9859	2.1000e-004	2.0000e-004	11.0511
Landscaping	0.0670	0.0254	2.1936	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5723	3.5723	3.4900e-003	0.0000	3.6596
Total	**1.9610**	**0.0349**	**2.1976**	**1.8000e-004**		**0.0128**	**0.0128**		**0.0128**	**0.0128**	**0.0000**	**14.5581**	**14.5581**	**3.7000e-003**	**2.0000e-004**	**14.7108**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	42.2350	0.5235	0.0127	59.0992
Unmitigated	50.5837	0.6543	0.0158	71.6553

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.73355 / 3.61463	14.5247	0.1874	4.5300e-003	20.5598
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	0.268528 / 0.0511483	0.5600	8.7700e-003	2.1000e-004	0.8422
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	13.4217 / 8.46152	34.0010	0.4387	0.0106	48.1286
Strip Mall	0.595543 / 0.36501	1.4981	0.0195	4.7000e-004	2.1249
Total		**50.5837**	**0.6543**	**0.0158**	**71.6554**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.58684 / 3.39414	12.1313	0.1500	3.6300e-003	16.9614
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	0.214823 / 0.0480282	0.4552	7.0200e-003	1.7000e-004	0.6810
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Retirement Community	10.7374 / 7.94537	28.3983	0.3510	8.5000e-003	39.7051
Strip Mall	0.476434 / 0.342745	1.2501	0.0156	3.8000e-004	1.7518
Total		**42.2350**	**0.5236**	**0.0127**	**59.0992**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.9284	1.0004	0.0000	41.9395
Unmitigated	33.8569	2.0009	0.0000	83.8789

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	40.48	8.2171	0.4856	0.0000	20.3575
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	23.11	4.6911	0.2772	0.0000	11.6221
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	94.76	19.2354	1.1368	0.0000	47.6550
Strip Mall	8.44	1.7132	0.1013	0.0000	4.2445
Total		**33.8569**	**2.0009**	**0.0000**	**83.8789**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	20.24	4.1085	0.2428	0.0000	10.1787
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Medical Office Building	11.555	2.3456	0.1386	0.0000	5.8110

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Retirement Community	47.38	9.6177	0.5684	0.0000	23.8275
Strip Mall	4.22	0.8566	0.0506	0.0000	2.1222
Total		**16.9284**	**1.0004**	**0.0000**	**41.9395**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C: TRANSPORTATION

MEMORANDUM

From: Frederik Venter, P.E.

To: Mark Tersini, KT Urban

Cc: Gian Martire, Senior Planner, City of Cupertino

Date: March 27, 2020

Re: Westport Cupertino – Alternative Proposal: Trip Generation Comparison

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1. Introduction

This memorandum summarizes the trip generation findings that result from the alternative proposal for the Westport Mixed-Use project. The purpose of this memorandum is to provide a comparison between the total trips generated by the originally proposed project, as documented in the Kimley-Horn Technical Memorandum dated December 12, 2019, and the alternative proposal provided to Kimley-Horn by KT Urban on February 5, 2020. Daily, AM peak hour, and PM peak hour trips for the Alternative Proposal, taking credits for the for the existing land uses (trip credits) are calculated. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, was used to develop trip generation estimates.

2. Existing Trips

The existing site is 71,254 square feet of shopping center use (The Oaks), which includes specialty restaurants, retailers, and other commercial space. The existing shopping center has been approximately 85% occupied over the last 2 +years. At 85% occupancy, the existing shopping center generates approximately 2,287 daily trips, 57 AM peak hour trips (36 IN / 21 OUT), and 230 PM peak hour trips (110 IN / 120 OUT). It should be noted that if full occupancy was assumed for the existing shopping center, the trips credited would have been even higher. This is a conservative estimate since ITE is based on gross lease area, which typically includes unoccupied units between 5% and 15%.

3. Alternative Proposal Project Trips

The trip generation for the Alternative Proposal was calculated using the same methodology and trip reduction credits as for the originally Proposed Project. The Multi-Family (mid-rise) land use was removed and Assisted Living, Continuing Care (Life Guidance / Memory Support), and Medical Office land users were added.

The Alternative Proposal would demolish the existing buildings and construct a mixed-use urban village with 88 low-rise multifamily residential units, 39 senior residential units, 140 assisted living units, and 27 life guidance/memory care units, 8,040 square feet of general retail and 2,140 square feet of medical office.

Internal trip capture was then applied using the National Cooperative Highway Research Program Report 684 (NCHRP 684), dated 2011. This methodology estimates the number of trips that have both the origin and destination within the alternative proposed site development. These internal trips are then subtracted from the total gross trips. After applying internal capture to the proposed project, reductions of 7% daily trips, 2% AM, and 12% PM were applied to gross trips.

Additional trip reductions were applied because the site is in a high-quality transit area. According to VTA TIA Guidelines, a 2% trip reduction can be used for housing within 2,000 feet (0.38 miles) of a major bus stop. A major bus stop meeting VTA's high-quality transit area definition of 6 buses per hour is located at De Anza College approximately 1900 feet from the project site. Applying the 2% trip reduction results in a reduction of -24 daily trips, -2 AM peak hour trips, and -2 PM peak hour trips. This trip reduction was only taken for residential trips.Lastly, pass-by reductions were applied to retail trips resulting in 8 fewer new trips during the PM peak. The net change between the originally Proposed Project and the Alternative Proposal results in 472 fewer daily trips.

Table 1 below summarizes the trip generation calculations.

Table 1 – Alternative Project, Original Project and Existing Conditions Trip Generation

Land Uses	ITE Land Use Code	Project Size		WEEKDAY	AM PEAK HOUR				PM PEAK HOUR			
				Daily Trips	Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Multifamily Housing (Low Rise)	220	-	Dwelling Unit(s)	7.32	0.46	23%	/	77%	0.56	63%	/	37%
Multifamily Housing (Mid-Rise)	221	-	Dwelling Unit(s)	5.44	0.36	26%	/	74%	0.44	61%	/	39%
Senior Adult Housing-Attached	252	-	Dwelling Unit(s)	3.70	0.20	35%	/	65%	0.26	55%	/	45%
Shopping Center	820	-	1,000 Sq Ft GLA	37.75	0.94	62%	/	38%	3.81	48%	/	52%
Existing Conditions												
Shopping Center (100% Occupancy)	820	71.254	1,000 Sq Ft GLA	2690	67	42	/	25	271	130	/	141
Shopping Center (85% Occupancy)[1]	820	60.5659	1,000 Sq Ft GLA	2287	57	36	/	21	230	110	/	120
Pass-By Trips for Shopping Center (PM = 34%)[3,4]				(78)	0	0	/	0	(78)	(37)	/	(41)
TOAL EXISTING TRIP CREDIT				**2209**	**57**	**36**	**/**	**21**	**152**	**73**	**/**	**79**
Proposed Alternative Project Conditions												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	646	40	9	/	31	49	31	/	18
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	146	8	3	/	5	10	6	/	4
Assisted Living	254	140	Bed(s)	364	27	17	/	10	36	14	/	22
Continuing Care Retirement Community	255	27	Unit(s)	66	4	3	/	1	4	2	/	2
Medical-Dental Office Building	720	2.14	1,000 Sq Ft	76	6	5	/	1	7	2	/	5
Shopping Center	820	8.04	1,000 Sq Ft GLA	304	8	5	/	3	31	15	/	16
Gross Trips Generated before Internal Capture				1,602	93	42	/	51	137	70	/	67
Internal Capture Trips for Alternative Project Conditions												
Multifamily Housing (Low-Rise)	220	88	Dwelling Unit(s)	(22)					(4)	(2)	/	(1)
Senior Adult Housing-Attached	252	39	Dwelling Unit(s)	(4)					0			
Assisted Living	254	140	Bed(s)	(12)					(2)	(1)	/	(1)
Continuing Care Retirement Community	255	27	Unit(s)	(2)					0			
Medical-Dental Office Building	720	2.14	1,000 Sq Ft	(16)	(1)	(1)			(2)	(1)	/	(1)
Shopping Center	820	8.04	1,000 Sq Ft GLA	(52)	(1)	(1)			(7)	(3)	/	(4)
Internal Capture Reduction				(108)	(2)	(2)			(15)	(7)	/	(8)
Trip Reductions due to Internal Capture[5]				7%	2%	5%			11%	10%	/	12%
Additional Project Trip Reductions												
VTA Major Bus Stop (Daily, AM, PM = 2%) [2]				(24)	(1)	(1)			(2)	(1)	/	(1)
Pass-By Trips for Shopping Center (PM = 34%)[3,4]				(8)					(8)	(4)	/	(4)
Project Trips				**1,462**	**39**	**39**			**112**	**58**	**/**	**54**
Existing Trip Credit				**2209**	**57**	**36**	**/**	**21**	**152**	**73**	**/**	**79**
Total Alternative Project Trips				**1462**	**39**	**39**	**#**	**0**	**112**	**58**	**/**	**54**
Net New Alternative Project Trips				**(747)**	**(18)**	**3**	**/**	**(21)**	**(40)**	**(15)**	**/**	**(25)**
Originally Proposed Project				**(275)**	**47**	**(3)**	**/**	**50**	**(22)**	**4**	**/**	**(26)**
Net Change Originally Proposed Project/ Alternative Proposal				**(472)**	**(65)**	**6**	**/**	**(71)**	**(18)**	**(19)**	**/**	**1**

Notes:

1. Assume current retail is 85% occupied

2. Per VTA Transportation Impact Analysis guidelines, a 2% vehicle trip reduction for housing trips can be applied for a nearby major bus stop
3. Pass-By trip reduction applied to shopping center PM peak hour trips and based on average rates from Appendix E ITE Trip Generation Handbook 3rd Edition
4. Daily pass-by trips only represent PM peak hour pass-by trips because no daily pass-by trip is resented in the ITE Trip Generation Handbook.
5. Trips reductions due to internal capture was calculated using NCHRP 684 methodology
6. Trip generation land uses based on average rates from ITE Trip Generation 10th Edition

4. Conclusions

Based on a comparison of the Proposed Project, the Alternative Proposal would result in 472 fewer daily trips, 65 fewer AM peak hour trips, and 18 fewer PM peak hour trips, and therefore project impacts would be less than those previously analyzed under the originally proposed project.

MEMORANDUM

DATE May 5, 2020

TO Gian Martire, Senior Planner

FROM Terri McCracken, Associate Principal

SUBJECT Response to Comments on the Westport Mixed-Use Project Final Environmental Impact Report

This memorandum provides responses to comments made at the April 15, 2020 Environmental Review Committee meeting on the Westport Mixed-Use Project Final Environmental Impact Report (EIR) and includes a text revision to the Final EIR. The Final EIR is comprised of the November 6, 2019 Draft EIR and the April 7, 2020 Response to Comments document.

As shown in Table 1, Responses to Comments on the Final EIR, the text revision is a typographical correction in the Draft EIR. These responses and text revision do not consist of clarification, amplification and insignificant modification in the Final EIR and do not constitute “significant new information” as defined in California Environmental Qualiy Act (CEQA) Guidelines Section 15088.5 or alter the conclusions of the environmental analysis in the Final EIR.

Underlined text represents language that has been added to the EIR; text with ~~strikethroug~~h has been deleted from the EIR.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
Written Comments Submitted		
1. Joseph Hauser, April 15, 2020		
1-1	Please add this letter to written communications for the Environmental review Committee meeting scheduled for Thursday 4/16/2020. The letter addresses Agenda Item 2. “Westport Development, Environmental Impact Report”.	These are essentially the same as the comments that were submitted by this commenter on November 25, 2019 during the comment period for the Draft EIR, which were responded to in Chapter 5, Response to Comments, of the Response to Comments Document as comment letter number B1 on pages 5-14 to 5-17.
1-2	The project, being on Stevens Creek between Mary Ave and the entrance to 85/280 will negatively impact access to the main corridor toward the city center, and access to and from Highway 85/280.	The commenter expresses an opinion about the potential impacts of the proposed project on the roadways in the vicinity of the project site and asserts that there will be negative impacts related to access to the city center and to all business on Stevens Creek Boulevard. The commenter provides no evidence to support this assertion. Transportation impacts resulting from the proposed project are discussed in Chapter 4.8, Transportation, of the Draft EIR beginning on page 4.8-15, and revisions to Chapter 4.8 are shown in Chapter 3, Revisions to the Draft EIR, in the Response to Comments document. As discussed in the Final EIR construction and operation of the proposed project would not result in any significant transportation impacts on Stevens Creek Boulevard or on the north bound on-ramp of State Route 85, which was evaluated as intersection #2 (State Route 85 (SR-85) North Bound Ramp Terminal).
1-3	The area surrounding the proposed project is already a highly-impacted area for the following activities. a The main entrance to De Anza College b Cupertino Senior Citizens Center c The main entrance to Memorial Park where there are numerous city events each year	The commenter expresses an opinion about the existing conditions in the project vicinity. The commenter’s observations are noted.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
	d Entrance to two major highways (85 and 280) e Access to the city yard facility f Access to the city dog park g Access to over 300 residential homes h Access to a condo complex i Access to the Glenbrook Apartments j Bicycle path to the Mary Avenue Bridge	
1-3	This project requires several General Plan amendments. (Setbacks, Height restrictions etc.) Why have a general plan if every developer asks for amendments?	The comment poses a question about the planning process but does not raise a specific environmental issue regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR. The proposed project does not include an amendment to the General Plan (Community Vision 2015-2040). As stated in Chapter 3, Project Description, of the Draft EIR, on page 3-28, as part of the Development Permit, the proposed project is requesting a density bonus of five units pursuant to State Density Bonus Law, Government Code Section 65915 *et seq*., as incorporated into the City's Housing Element (see page H-29) and Cupertino Municipal Code Chapter 19.56). Pursuant to Density Bonus Law, the applicant is also requesting waivers of development standards for height, slope setbacks, and the location of senior housing that the developer states would have the effect of physically precluding the development of the proposed project at the density proposed. The granting of a density bonus shall not require a general plan amendment, zone change, or other discretionary approval (Government Code Section 659015(f)(5)) and the City may not apply any development standard that would physically preclude a qualifying density bonus development from being constructed if an applicant requests a waiver of that standard (Government Code Section 65915(e)(1)).
1-4	The state Density Bonus Law allows this project 3 concessions- not more! They also want to remove protected trees, consolidate all BMR housing into one building, not provide a mix of BMR unit sizes, not	This comment expresses an opinion about the proposed project but does not state a specific concern or question regarding the sufficiency of the analysis or

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
	provide required amount of retail facing Stevens Creek, etc. This is WAY MORE than 3 concessions. In addition, the height concessions is 100% more than what is allowed. Where is the limit?	mitigation measures contained in the EIR, nor does the comment raise a new environmental issue. The application of Density Bonus regulations is described on page 3-10 of Chapter 3, Project Description, of the Draft EIR. As described in the Project Description, Draft EIR page 3-28, the applicant is requesting density bonus waivers for height, slope setback, and dispersion of affordable units. The applicant has not requested any concessions. The City's regulations for protected trees are described on pages 4.2-3 and 4.2-4 in Chapter 4.2, Biological Resources, of the Draft EIR. As stated in impact discussion BIO-2 starting on page 4.2-11, the removal of protected trees is permitted by the City with approval of a tree removal permit. Implementation of Mitigation Measure BIO-2 would ensure compliance with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18).
1-5	There is only one other exit area from the area being impacted. Those exits are on to Stelling Ave., and only has a traffic light on Greenleaf and Stelling. Greenleaf has a dangerously sharp S-curve right by Garden Gate Elementary School. The other exits onto Stelling require drivers to try to get onto Stelling when there is a break in the traffic. This is virtually impossible during rush hour. With the additional traffic to be generated by this project, many drivers will find an alternative route through the neighborhood and past Garden Gate School. During rush hour, many parents use Greenleaf to let their children disembark from their cars, or cross streets to the school. This is already dangerous and will only get worse.	The commenter expresses an opinion about the existing conditions in the project vicinity and asserts that the operation of the proposed project will create worse conditions on the roadways in the vicinity of the project site. The commenter provides no substantial evidence to support these assertions. The commenter does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies for their consideration in reviewing the Final EIR and the project. As discussed in Chapter 3, Project Description, of the Draft EIR, on page 3-21 the proposed project would provide one access point from Stevens Creek Boulevard and three access points from Mary Avenue.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
		According to staff at Hexagon, the transportation consulting firm hired by the city, in response to this comment in February 2020, based on the project site location and existing travel patterns in the area, project-generated trips would exit the site on Mary Avenue and use Stevens Creek Boulevard to access Stelling Road. This is the most logical route. Site access to and from Stelling Road through the adjacent neighborhood to the north is highly unlikely due to the circuitous route, which would require traveling along six different residential streets with a speed limit of 25 miles per hour, traversing multiple intersections with stop signs, and driving past Garden Gate Elementary School on Greenleaf Drive. Furthermore, due to the presence of the elementary school, drivers are more likely to avoid Greenleaf Drive during the peak pick-up and drop-off periods of the school day, because it would cause them further delay. For these reasons, traveling through the neighborhood to the north to access Stelling Road does not offer a practical alternative route from the project site. Note that some future residents of the project may have children that attend Garden Gate Elementary School and, therefore, may travel between the project site and the neighborhood school. However, the number of such trips between the project site and the school would be negligible (likely not noticeable to neighborhood residents) and are not considered cut-through trips because the destination (the school) is located within the neighborhood.
1-6	The proposed height limitation of this project is not in keeping with height limitations along highway 85 for at least a mile radius.	This comment expresses an opinion about height limits but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies as part of their consideration in reviewing the Final EIR and the project.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
1-7	At times the number of cars in the turn lane from Stevens Creek Blvd onto Mary Ave., and the turn lane from Mary onto Stevens Creek Blvd already exceeds the amount of space allocated, thereby causing backups onto regular traffic lanes. This will only get worse.	The commenter expresses an opinion about the existing conditions and speculates about future conditions. The comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies for their consideration in reviewing the Final EIR and the project. Transportation impacts resulting from the proposed project are discussed in Chapter 4.8, Transportation, of the Draft EIR beginning on page 4.8-15, and revisions to Chapter 4.8 are shown in Chapter 3, Revisions to the Draft EIR, in the Response to Comments document. As discussed in the Final EIR construction and operation of the proposed project would not result in any significant impacts on Stevens Creek Boulevard. The project would have no effect on the operation of the eastbound left-turn pocket on Stevens Creek Boulevard [onto Mary Avenue], because the project would generate zero net new inbound vehicle trips during both the AM and PM peak commute periods of the day. During the AM peak hour, the southbound left-turn movement from Mary Avenue onto eastbound Stevens Creek Boulevard is currently operating at an acceptable level of service (LOS D) and would continue to do so with the addition of project-generated outbound traffic. The project would result in fewer PM peak hour outbound vehicle trips compared to the existing shopping center and, thus, vehicle queues would likely decrease for this movement with the project during the PM peak hour.
1-8	There are no buildings in this area with heights larger than 2 stories.	The commenter's opinion about two-story building heights in the project area is noted; however, as shown in Chapter 3, Project Description, of the Draft EIR, on Figure 3-2 (Aerial of the Project Site) the De Anza College campus is located

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
	I hope the city will take these points into consideration. As a longtime resident of Cupertino, I have witnessed the area becoming a traffic nightmare, and city promises to residents' better quality of life being largely ignored so that developers can get their way. I am not against reasonable growth, but this project is massive, and does not fit into the area being allocated. It will not only impact the immediate area, but will impact the entire city. Recent events have indicated that residents are mostly fed up with the type of projects the city has approved. I hope this project will be an example of a new attitude by the city.	across Stevens Creek Boulevard from the project site and has buildings that range in height from one to four stories. The commenter does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies for their consideration in reviewing the Final EIR and the project.
2 Peggy Griffin, April 15, 2020		
2-1	Please add this letter to written communications for the Environmental Review Committee meeting scheduled for Thursday, 4/16/2020. The letter addresses Agenda Item 2, "Westport Development, Environmental Impact Report". In the "Westport Development Response to Comments (RTC)" document:	This comment serves as an introduction to the comments on the Response to Comments Document that follow. Please see Responses to Comments 2-2 through 2-6.
2-2	1) **P. 2-13, 1st bullet on page**: A sign is posted at the "entrance(s) to the job site" a. COMMENT: There should also be one at the intersection of Stevens Creek and Mary Ave for visibility to all commuters and pedestrians.	The commenter expresses an opinion about the existing conditions and speculates about future conditions. The comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies for their consideration in reviewing the Final EIR and the project. This comment is referring to Mitigation Measure NOISE-1 listed in Table 2-2, Summary of Impacts and Mitigation Measures, in Chapter 2, Executive Summary. The third bullet in the Mitigation Measure is one of the eight

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
		actions listed to reduce impacts from construction noise. The third bullet states: *At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, which includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City*. In addition, the preceding bullet (second) also requires noticing of construction to those who would frequent the project area and states: *At least 90 days prior to the start of construction activities, all offsite businesses and residents within 300 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the proposed project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification should include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.*
2-3	**2) P. 2-14, Noise, NOISE-3 – THIS HAS NOT BEEN ADDRESSED** a) COMMENT1: This item, NOISE-3, refers to noise generated AFTER construction but the mitigation measures referenced as "mitigating" this problem are all construction-related. None of them address the	This commenter incorrectly asserts that the noise impacts from the operation of the proposed project have not been addressed. The commenter cites pages from Chapter 2, Executive Summary, of the Response to Comments Document, which does not provide the impact discussion. Noise impacts from

Comment #	Comment	Response
	increased daily noise levels of the final completed project. Please note that without mitigation the significance level is a 5!	transportation from project operation are discussed in the impact discussion NOISE-1 and start on page 4.7-15 of Chapter 4.7, Noise, of the Draft EIR. As discussed in Chapter 4.7, in general, a traffic noise increase of less than 3 A-Weighted Decibel (dBA), which an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear. As stated in Chapter 4.7, a 3-dBA increase is barely perceptible to people, while a 5-dBA increase is readily noticeable. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant. Generally, for a traffic noise level to increase by 3 dBA the traffic volumes on project area roadways would essentially need to double. As shown in Table 4.7-10, if the trips generated from the proposed project were new trips, they would not have a significant impact on traffic noise levels. The addition of trips to the existing noise levels on Stevens Creek Boulevard near the project site would have a less than 1 dBA increase. The addition of trips to the existing noise levels on Mary Avenue near the project site would have a slightly greater than 1 dBA increase; however, the increase on either roadway would be less than 3 dBA and, therefore, not perceptible. Therefore, permanent noise increases due to proposed project-related traffic would be less than significant.
2-3	b. COMMENT2: The noise in the AM and PM rush hour period due to cars backed up along Stevens Creek and Mary Ave and cars lined up to leave the premises DO have the potential of substantially increase noise in the area of the completed project. Nothing addresses this noise issue, especially during AM/PM peak commute hours.	The commenter expresses an opinion about noise impacts and speculates about noise impacts under future conditions. The commenter provides no substantial evidence to support these assertions. The comment does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the Final EIR, nor does the comment raise a new environmental issue. The comment is acknowledged for the record and will be forwarded to the decision-making bodies for their consideration in reviewing the Final EIR and the project.

Comment #	Comment	Response
		See the Response to Comment 2-2 above regarding traffic noise from the proposed project.
2-4	**3) P. 2-14, Transportation and Circulation, TRANS-3** a) COMMENT: This item, TRANS-3, refers to transportation and circulation impacts AFTER construction. It states “no impacts” yet the following numbers are presented i. Stevens Creek and Mary 1. AM Delay goes from 31.5 to 49.1 and from LOS C to D! An increase of 17.6 seconds, over 50% increase. 2. PM Delay goes from 34.9 to 46.3 and from LOS C to D! An increase of 11.4 seconds, almost 1/3 more. ii. Stevens Creek NB SR 85 On/Off Ramps 1. AM Delay goes from 30.0 to 47.6 and from LOS C to D! An increase of 17.6 seconds, over 50% increase. 2. PM Delay no change	The commenter misinterprets the standard for determining a significant impact. As discussed in Chapter 4.8, Transportation, of the Draft EIR, and listed in Table 4.8-1, General Plan Policies Related to Transportation, on page 4.8-3, the General Plan Policy M-1.2 states that level-of-service (LOS) D is acceptable during AM (morning) and PM (evening) peak traffic hours. This is reiterated on page 4.8-6 in Section 4.7.2.3, Level of Service. As shown in Chapter 3, Revisions to the Draft EIR, on page 3-10 through page 3-13, intersection #2 (Stevens Creek Boulevard/SR-85 Northbound Ramp Terminal) is a Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP) intersection within the City of Cupertino and therefore, the City applies its own standard of LOS D to CMP intersections. Note this revision correctly applies the City’s higher standard of LOS D compared to the VMT standard of LOS E. The commenter incorrectly states that TRANS-3 has no impacts. Impact discussion TRANS-3 states that impacts would be less than significant. The commenter also incorrectly characterizes the results of the transportation analysis and mixes the results from the Existing without Project scenario and the Cumulative plus Project scenario. Please see Table 4.8-6, Existing plus Project Intersection Level of Service Results, and Table 4.8-8, Cumulative plus Project Intersection Level of Service Results, on pages 3-11 and 3-12, respectively, in Chapter 3 of the Response to Comments Document for the correct results. As shown in the Final EIR, both intersections in Existing plus Project conditions would operate under acceptable level-of-service standards, LOS C, and in Cumulative plus Project conditions both intersections would

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
		operate under acceptable level-of-service standards, LOS D (intersection #1) and LOS C (intersection #2)
2-5	COMMENT: There's no mention of a mitigation to try and coordinate De Anza class times to try and reduce congestion during peak AM and PM traffic.	Pursuant to CEQA Guidelines Section 15126.4(a)(3), mitigation measures are not required for impacts that are not found to be significant. The mitigation measures in this Final EIR are only for impacts that were found to be significant. As discussed in the Final EIR, construction and operation would not result in a significant traffic congestion impact and no mitigation measures are required.
2-6	**4) P. 2-15, Utilities and Service Systems, UTIL-1** COMMENT: One of the mitigation measures for UTIL-1 and UTIL-2 includes increasing the 13.8 mgd limit so the project passes. This mitigation measure should be deleted! It's not fixing the problem, it's changing the requirement to avoid a problem! If the prior agreement between CSD and the City of Santa Clara that currently limits the permitted peak wet weather flow capacity of 13.8 mgd through the Santa Clara sanitary sewer system were to be updated to increase the permitted peak wet weather flow sufficiently to accommodate the proposed project's flows, this would also change the impacts of the project to less than significant. If this were to occur prior to the City's approval of building permits, then Mitigation Measure UTIL-1 would no longer be required to be implemented.	The commenter misunderstands the relationship between the wastewater treatment impact discussion and the statement in the impact conclusion regarding the possibility of a new contract between the Cupertino Sanitary District (CSD) and the City of Santa Clara. The CSD provides sanitary sewer services for the project site, and the wastewater generated from the project would be treated at the San José/Santa Clara Water Pollution Control Plant (SJ/SCWPCP) after flowing through a portion of the City of Santa Clara's sewer system. Accordingly, the CSD has capacity contracts with the SJ/SCWPCP and the City of Santa Clara that limit the amounts of wastewater that can be treated and can flow through the system (pipes), respectively. The proposed project, plus the other uses in Cupertino, would exceed the contractual capacity (13.8 million gallons per day during peak wet weather flows), which is a significant impact (see page 3-15 of the Response to Comment Document). Mitigation Measure UTIL-1 requires the applicant to reduce the project's contribution to City of Santa Clara's sewer system before issuance of any building permits. No change to the contractual limits would occur as a result of the proposed project or Mitigation Measure UTIL-1.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
		The text cited by the commenter is a statement of fact that if the CSD and the City of Santa Clara renegotiate their contract to allow more flow through the City of Santa Clara's sewer system to the SJ/SCWPCP which would accommodate the City of Cupertino's potential contribution, then there would not be an impact. This statement has no relationship to the impact discussion or the conclusion in the FEIR, it is just an explanation of the contractual arrangements. With or without this statement, the impact is still significant and Mitigation Measure UTIL-1 is still required.
2-7	**5) P. 3-3, Project Description** a) COMMENT: In the first large corrected paragraph, LINE 17, "0.105 mgd" should be rounded up to "0.106 mgd" to match the number used on Page 3-15, paragraph 3, last line. LINE 17, "weather flow…is 105,707 gpd or 0.105 mgd." SHOULD BE 0.106 mgd	This revision corrects the rounding error noted by the commenter. The revision to the text on page 3-3 of Chapter 3, Revisions to the Draft EIR, of the Response to Comments document, is as follows: The peak wet weather flow for the proposed project is 105,707 gpd or 0.10~~5~~6 mgd. This revision does not affect any conclusions or significance determinations in the Final EIR.
2-8	**6) Pedestrian safety** a. COMMENT: A mitigation measure due to the removal of setbacks and the increased queuing on Mary Ave waiting to get onto Stevens Creek and queuing to get onto Hwy 85, the sidewalks along Mary and Stevens Creek should be wider than normal, allowing pedestrians to be further away from traffic.	Pursuant to CEQA Guidelines Section 15126.4(a)(3), mitigation measures are not required for impacts that are not found to be significant. The mitigation measures in this Final EIR are only for impacts that were found to be significant. As discussed in the Final EIR, construction and operation would not result in a significant traffic queuing impact and no mitigation measures are required.
3 Aaron Messing, April 16, 2020		
3-1	We are writing on behalf of Cupertino Residents for Responsible Development ("Residents") with regard to the Westport Mixed-Use Project ("Project") Draft Environmental Impact Report ("DEIR") and	The comment is noted.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
	the Response to Comments ("Response") prepared by the City of Cupertino ("City") pursuant to the California Environmental Quality Act ("CEQA"). Residents reviewed the City's Response with air quality and greenhouse gas ("GHG") experts from Soil Water Air Protection Enterprise, Matt Hagemann, P.G, C.Hg. and Paul E. Rosenfeld, PhD, and traffic and civil engineer Dan Smith. Based on our legal and technical review, Residents has concluded that the City has adequately addressed the issues raised in our prior comments on the DEIR. In response to our comments regarding potentially significant impacts to air quality, GHGs, and traffic on or near the Project's site, the City revised its analysis and the mitigation measures proposed in the DEIR to provide adequate analysis and protection for those impacts raised in our comments: Air Quality: • The City added the following two protective measures under Mitigation Measure AQ-2 for fugitive dust construction emissions in order to make the Mitigation Measure consistent with the DEIR's construction emissions modeling analysis: o Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. o All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.	

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
	Greenhouse Gas: • The City significantly clarified and elaborated on the Project's consistency with the City's Climate Action Plan ("CAP") to include an analysis of consistency with all the CAP's community-wide measures. Doing so showed a good faith effort to demonstrate consistency with the CAP as a means of determining that the Project's greenhouse gases would be less than significant, as required by CEQA. Traffic: • The City revised the project's annual Vehicle Miles Traveled ("VMT") projections to be consistent with the DEIR's GHG Appendix; and • The City revised the project's VMT analysis to include VMT projects on a per capita basis as opposed to annual or daily, per the CEQA Technical Advisory on Evaluating Transportation Impacts. We thank the City for thoroughly addressing the legal and technical issues identified in our comments, and for its good faith responses and additional investigations and revisions. We thank the City for considering our views and have no further objections to the Project.	
Verbal Comments Provided on April 16, 2020		
4. The following topics were brought up by participants at the Environmental Review Committee		

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
4-1	Alternatives to the proposed project including an alternative with no Density Bonus Waivers and a reduced height alternative	As described in Chapter 5, Alternatives to the Proposed Project, of the Draft EIR, on pager 5-1, Section 15126.6(a) of the CEQA Guidelines states that: *An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.* As summarized in the Chapter 5 of the Draft EIR on page 5-2, The significant-but-mitigable impacts of the proposed project are the following: ▪ **Air Quality.** Construction impacts from emissions of fine particulate matter (PM_{10} and $PM_{2.5}$) and toxic air contaminants (TAC) from construction equipment. ▪ **Biological Resources.** Construction impacts to nesting birds and compliance with the City's tree preservation regulations. ▪ **Cultural and Tribal Cultural Resources.** Construction impacts to unknown subsurface archeological and tribal cultural resources. ▪ **Geology and Soils.** Construction impacts to unknown unique paleontological resources. ▪ **Noise.** Generation of a substantial temporary increase in ambient noise levels in the vicinity of the proposed project during construction.

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
		▪ **Utilities and Service Systems.** Determination by the wastewater treatments provider that it does not have adequate capacity to serve the project's and cumulative projects projected demand. Because the proposed density bonus waivers of development standards for height, slope setbacks, and the location of senior housing would not cause a significant effect on the environment, no alternative was considered for these elements of the project.
4-2	Noise from project traffic	As discussed in Chapter 4.7, Noise, of the Draft EIR, in general, a traffic noise increase of less than 3 A-Weighted Decibel (dBA), which an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear. As stated in Chapter 4.7, a 3-dBA increase is barely perceptible to people, while a 5-dBA increase is readily noticeable. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant. Generally, for a traffic noise level to increase by 3 dBA the traffic volumes on project area roadways would essentially need to double. As shown in Table 4.7-10, if the trips generated from the proposed project were new trips, they would not have a significant impact on traffic noise levels. The addition of trips to the existing noise levels on Stevens Creek Boulevard near the project site would have a less than 1 dBA increase. The addition of trips to the existing noise levels on Mary Avenue near the project site would have a slightly greater than 1 dBA increase; however, the increase on either roadway would be less than 3 dBA and, therefore, not perceptible. Therefore, permanent noise increases due to proposed project-related traffic would be less than significant.
4-3	Class 1 Bike Path (Oaks Development Bike Path)	Some commenters expressed concern because the Class 1 Bike Path (Oaks Development Bike Path) described in the 2016 *Bicycle Transportation Plan*

Comment #	Comment	Response
		(2016 Bike Plan) and shown on Figure 3-7, Bikeway Projects, page 3-8 of the Bike Plan, is not shown on the project site plans. As discussed in Chapter 4.8, Transportation, of the Draft EIR, the proposed project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities (page 4.8-22). As described in Chapter 3, Project Description (see pages 3-21 and 3-22) and Chapter 4.8 (see pages 4.8-21 and 4.8-22), the EIR considered the inclusion of the bike facilities identified in the 2016 Bike Plan and showed the Class IV Separated Bikeway on the site plans. Unlike the Class IV Separated Bikeway on Stevens Creek that is identified in the 2016 Bike Plan as a Tier 1 project intended to be implemented within the first 5 years and was assigned the maximum 20 points for being needed for safety (to reduce collisions), the Class 1 Bike Path, is a Tier 3 project that was assigned no safety points and is intended for implementation within 20 years. Although Tier 3 projects may be implemented at any time, they may be delayed. Accordingly, the precise location of the Class 1 Bike Path has not been determined and is not shown on the site plans. As the final site plans are prepared, if the Class 1 Bike Path is not installed as part of the proposed project this would not be an impact under CEQA, because this part of the bicycle network was not established for the purpose of reducing or eliminating an impact, which for transportation would be a safety impact (see page 6-6 of Chapter 6, Implementation, and page F7 of Appendix F, Project List, of the Bike Plan.
4-4	Preservation of oak trees on the project site	As discussed in Chapter 3, Project Description, of the Draft EIR on page 3-19 in Section 3.4.1.4. Landscaping, and page 3-27 in Section 3.4.2, Construction and Demolition the proposed project would include landscaping throughout the interior and the perimeter of the project site. See Figure 3-10. The Arborist Report (included in Appendix D of the Draft EIR) that was prepared for the project site included an evaluation of 83 trees on the project site. The

TABLE 1 RESPONSE TO COMMENTS ON THE WESTPORT MIXED-USE PROJECT

Comment #	Comment	Response
		proposed project would involve the removal of the existing landscaping and trees on site, except for four oak trees which will be relocated on the project site and would involve planting approximately 400 additional trees. The City's regulations for protected trees are described on pages 4.2-3 and 4.2-4 in Chapter 4.2, Biological Resources, of the Draft EIR. As stated in impact discussion BIO-2 starting on page 4.2-11, the removal of protected trees is permitted by the City following approval of a tree removal permit. Implementation of Mitigation Measure BIO-2 would ensure compliance with the City of Cupertino's Protected Trees Ordinance (Cupertino Municipal Code Section 14.18).
4-5	Pedestrian safety	As discussed in Chapter 4.8, Transportation, of the Draft EIR, on page 4.8-21, the proposed project is expected to increase the number of pedestrians using the existing sidewalks and crosswalks in the area by 20 percent. The proposed project includes an internal sidewalk and bicycle network, in addition to sidewalk modifications along Stevens Creek Boulevard and Mary Avenue. The sidewalk modifications would include detaching the sidewalk along Stevens Creek Boulevard and required modifications along Mary Avenue to facilitate on and offsite improvements. The project site would continue to be accessible to pedestrians from Mary Avenue and Stevens Creek Boulevard, and the on-site circulation network would provide pedestrian and bicycle circulation within the project site. The overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site. The proposed project would not eliminate or impede any existing pedestrian facilities, nor would it conflict with any of the goals and policies in the City's Pedestrian Plan.

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