CUPERTINO PUBLIC STORAGE PROJECT
CATEGORICAL EXEMPTION

CUPERTINO, CALIFORNIA

LSA

May 2019

This page intentionally left blank

CUPERTINO PUBLIC STORAGE PROJECT
CATEGORICAL EXEMPTION

CUPERTINO, CALIFORNIA

Submitted to:

City of Cupertino
10300 Torre Avenue
Cupertino, California 95014

Prepared by:

LSA
157 Park Place
Point Richmond, California 94801
510.236.6810

Project No. COC1803

LSA

May 2019

This page intentionally left blank

TABLE OF CONTENTS

FIGURES AND TABLES ii
LIST OF ABBREVIATIONS AND ACRONYMS iii
1.0 INTRODUCTION 1
2.0 PROJECT DESCRIPTION 3
2.1 PROJECT SITE 3
2.1.1 Location 3
2.1.2 Regulatory Setting 3
2.1.3 Existing Site Conditions 3
2.2 PROPOSED PROJECT 4
2.2.1 Building Program 4
2.2.2 Open Space and Landscaping 4
2.2.3 Utilities and Infrastructure 4
2.2.4 Demolition, Grading, and Construction 11
2.3 PROJECT APPROVALS 11
3.0 EXEMPTIONS 13
3.1 CRITERION SECTION 15332(A): GENERAL PLAN AND ZONING CONSISTENCY 13
3.1.1 General Plan 14
3.1.2 Zoning 14
3.2 CRITERION SECTION 15332(B): PROJECT LOCATION, SIZE, AND CONTEXT 14
3.3 CRITERION SECTION 15332(C): ENDANGERED, RARE, OR THREATENED SPECIES 15
3.4 CRITERION SECTION 15332(D): TRAFFIC, NOISE, AIR QUALITY OR WATER QUALITY 16
3.4.1 Traffic, Parking, Access and Circulation 16
3.4.2 Noise 17
3.4.3 Air Quality 28
3.4.4 Greenhouse Gas Emissions 34
3.4.5 Water Quality 37
3.5 CRITERION SECTION 15332(E): UTILITIES AND PUBLIC SERVICES 38
3.5.1 Stormwater 38
3.5.2 Water 39
3.5.3 Wastewater 39
3.5.4 Solid Waste 40
3.5.5 Police Services 40
3.5.6 Fire Protection Services 40
3.5.7 Schools 41
4.0 EXCEPTONS TO CATEGORICAL EXEMPTIONS 43
4.1 CRITERION SECTION 15300.2(A): LOCATION 43
4.2 CRITERION SECTION 15300.2(B): CUMULATIVE IMPACT 43
4.3 CRITERION SECTION 15300.2(C): SIGNIFICANT EFFECT 44
4.4 CRITERION SECTION 15300.2(D): SCENIC HIGHWAY 44
4.5 CRITERION SECTION 15300.2(E): HAZARDOUS WASTE SITES 44
4.6 CRITERION SECTION 15300.2(F): HISTORIC RESOURCES 44
4.7 CONCLUSION 45

5.0 STREAMLINING UNDER CEQA GUIDELINES SECTION 15183 47
5.1 CEQA GUIDELINES SECITON 15183 47
5.2 APPLICABILITY OF SECTION 15183 TO THE PROPOSED PROJECT 47

APPENDICES

A: TRIP GENERATION ANALYSIS
B: AIR QUALITY AND GREENHOUSE GAS EMISSIONS ANALYSIS
C: NOISE ANALYSIS

FIGURES

Figure 2-1: Project Location and Regional Vicinity Map 5
Figure 2-2: Aerial Photograph of the Project Site and Surrounding Land Uses 6
Figure 2-3: Existing Site Conditions 7
Figure 2-4: Conceptual Site Plan 8
Figure 2-5: Conceptual Building Elevations 9

TABLES

Table 2.A: Potential Permits and Approvals 12
Table 3.A: Project Trip Generation 16
Table 3.B: Land Use Compatibility for Community Noise Environments 19
Table 3.C: City of Cupertino Daytime and Nighttime Maximum Noise Levels 20
Table 3.D: City of Cupertino Example Maximum Permissible Noise Levels 20
Table 3.E: Typical Construction Equipment Noise Levels 22
Table 3.F: Project Construction Emissions in Pounds Per Day 30
Table 3.G: Project Operational Emissions 32
Table 3.H: Inhalation Health Risks from Project Construction to Off-Site Receptors 33
Table 3.I: Consistency with Climate Action Plan Measures 36

LIST OF ABBREVIATIONS AND ACRONYMS

AF	acre feet
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BMP	best management practice
CalEEMod	California Emissions Estimator Model
Cal Water	California Water Service
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
dB	Decibels
dBA	A-weighted decibels
District	Cal Water Los Altos Suburban District
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
gpd	gallons per day
GWP	Global Warming Potential
HFC	hydrofluorocarbons
HVAC	heating, ventilation, and air conditioning
I-280	Interstate 280
ITE	Institute of Transportation Engineers
L_{max}	maximum instantaneous noise level
mgd	million gallons per day

MRP	Municipal Regional Permit
N_2O	nitrous oxide
NO_2	nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
Pb	lead
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric
PM	particulate matter
$PM_{2.5}$	particulate matter < 2.5 microns in diameter
PM_{10}	particulate matter < 10 microns in diameter (but > 2.5 microns)
Regional Water Board	San Francisco Regional Water Quality Control Board
ROG	reactive organic gas
SCCFD	Santa Clara County Fire Department
SCP	Stormwater Control Plan
SCVURPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminants
$\mu g/m^3$	micrograms per cubic meter
WPCP	Water Pollution Control Plant

1.0 INTRODUCTION

Article 19 of the California Environmental Quality Act (CEQA) Guidelines includes, as required by Public Resources Code Section 21084, a list of classes of projects which have been determined not to have a significant effect on the environment and, as a result, are exempt from review under CEQA. This document has been prepared to serve as the basis for compliance with CEQA as it pertains to the Cupertino Public Storage Project (proposed project). This document demonstrates that the proposed project qualifies for a CEQA Exemption as an Infill Development Project (Class 32), consistent with the provisions of CEQA Guidelines Sections 15332 and 15300.2 and provides information for City of Cupertino decision-makers regarding a finding that the proposed project is exempt under CEQA.

In summary, this document demonstrates that the proposed project qualifies for an exemption under CEQA Guidelines Section 15332 as an infill development project because: 1) the proposed project is consistent with the applicable General Plan designation and all applicable General Plan policies, as well as the applicable Zoning designations and regulations; 2) the proposed project would occur within the City limits on a site of less than 5 acres in size that is substantially surrounded by urban uses; 3) the project site has no value for endangered, rare or threatened species; 4) the proposed project would not result in any significant effects related to traffic, noise, air quality or water quality; and 5) the project site can be adequately served by all required utilities and public services. In addition, none of the exceptions to categorical exemptions identified in CEQA Guidelines Section 15300.2 apply; therefore, the proposed project is categorically exempt from CEQA review as a Class 32 In-Fill Development Project pursuant to CEQA Guidelines Sections 15300 and 15332.

In addition, Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 allow streamlined environmental review for projects that are "consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." As stated above, the proposed project would be consistent with the General Plan designations and zoning for the site described in the Cupertino General Plan and analyzed in the General Plan Amendment, Housing Element Update, and Associated Rezoning Final Environmental Impact Report (SCH No. 2014032007), which was certified on December 4, 2014, and would meet the requirements for streamlining under CEQA Guidelines Section 15183.

This page intentionally left blank

2.0 PROJECT DESCRIPTION

The following describes the proposed Cupertino Public Storage Project (proposed project). This section includes a description of the project's location and existing site characteristics, project components, required approvals, and entitlements. The City of Cupertino (City) is the lead agency for review of the project under the California Environmental Quality Act (CEQA).

2.1 PROJECT SITE

The following section describes the location and characteristics of the project site and provides a brief overview of the existing land uses within and in the vicinity of the site.

2.1.1 Location

The approximately 3-acre (130,462-square-foot) project site is located at 20565 Valley Green Drive in the City of Cupertino in Santa Clara County (Assessor's Parcel Number [APN] 326-10-044). The site is bounded by Interstate 280 (I-280) to the north, residential uses to the east, office uses and associated parking lots to the south, and residential uses to the west.

Regional vehicular access to the project site is provided by I-280, an on- and off-ramp for which is located northwest of the project site at North De Anza Boulevard. Figure 2-1 shows the site's regional and local context. Figure 2-2 is an aerial photograph of the project site and surrounding land uses.

2.1.2 Regulatory Setting

The City of Cupertino General Plan Land Use Map designates the project site as Industrial/ Residential. The Industrial/Residential designation allows industrial uses and residential uses or a compatible combination of the two. Industrial use refers to manufacturing, assembly, and research and development. Administrative offices that support manufacturing and wholesaling are included.[1]

The project site is designated as Planned Development with General Commercial, Light Industrial, and Residential intent (P [CG, ML, RES]) on the City of Cupertino Zoning Map. The P 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 and to provide for a greater flexibility of land use intensity and design because of accessibility, ownership patterns, topographical considerations, and community design objectives.[2]

2.1.3 Existing Site Conditions

As shown in Figure 2-3, the project site is generally level and developed with nine single-story buildings totaling 54,186 square feet. Eight of the existing buildings are used solely as storage buildings, and one provides both office and storage uses as well as a residential unit for an onsite

1 Cupertino, City of, 2015. *Cupertino General Plan: Community Vision 2015-2040*. October 20.
2 Cupertino, City of, 2018. Zoning Map & Ordinance. Website: www.cupertino.org/our-city/departments/community-development/planning/zoning (accessed November 28, 2018).

building manager. The existing buildings contain a total of 535 storage units. The project site is accessible from a private driveway through the adjacent parcel to the south, access to which is granted by an ingress-egress easement. A 10-foot pole line easement for Pacific Gas and Electric (PG&E) is located along the northern boundary of the project site. There are no designated parking spaces within the project site. The project site includes 27 ornamental trees around the perimeter.

2.2 PROPOSED PROJECT

As described in more detail below, the proposed project would result in the demolition of the existing buildings on the project site and construction of two new four-story self-storage buildings, totaling 263,671 square feet. The new buildings would contain a total of approximately 2,400 storage units. Figure 2-4 shows a conceptual site plan for the proposed project.

2.2.1 Building Program

The proposed project would include the construction of two new four-story self-storage buildings, each with a below-grade basement. As shown on Figure 2-4, Building 1 would be approximately 129,856 square feet, and would include an office space in the northeast corner of the building. Building 2 would be approximately 133,815 square feet, and would include a manager's apartment in the northwest corner of the building. Both buildings would be a maximum of 45 feet in height. Conceptual building elevations are shown in Figure 2-5.

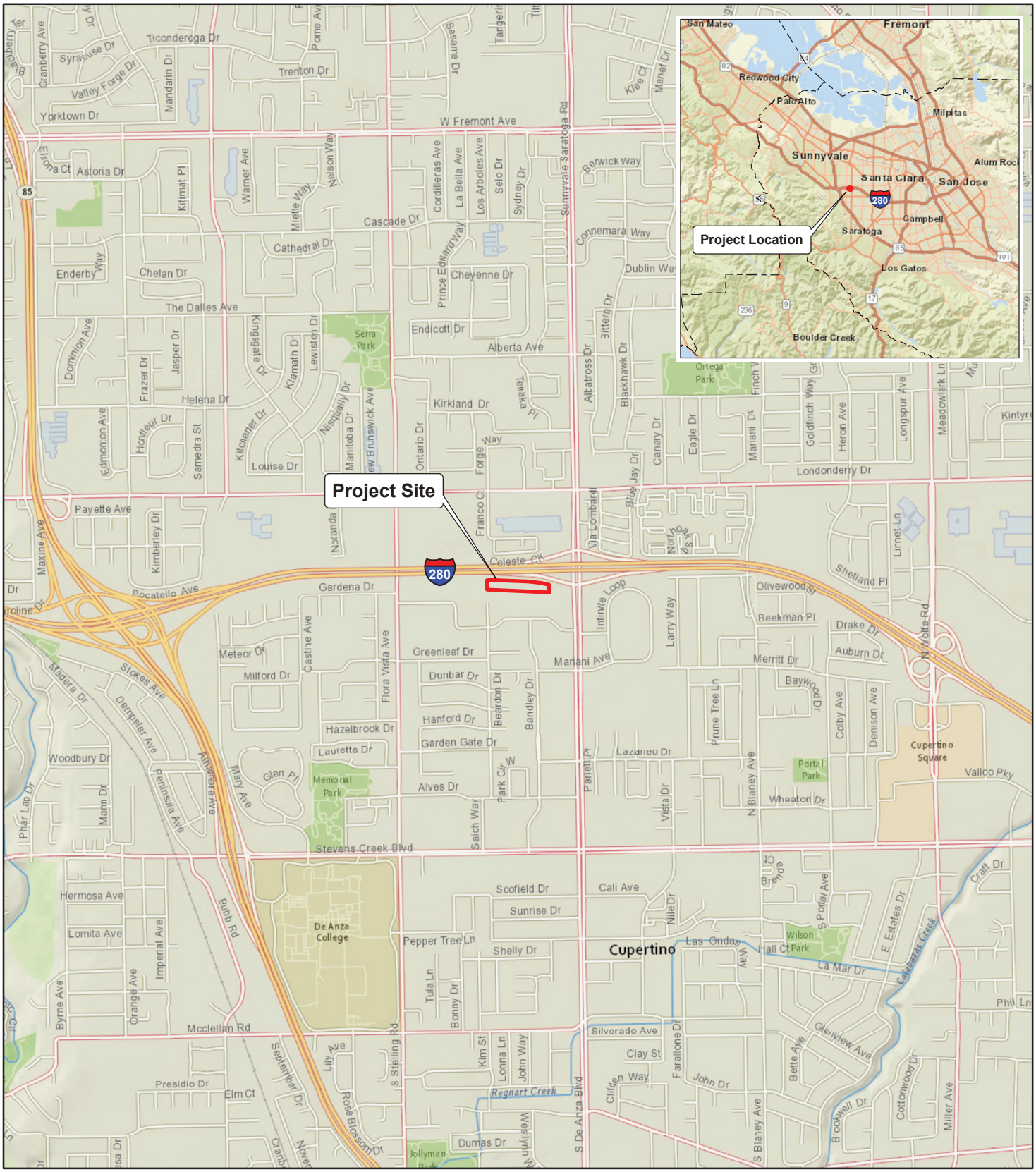
Both of the proposed buildings would include a lobby in the center of the building with elevators and stairwells, as well as additional stairwells on the east and west sides of the buildings. A total of 32 automobile parking spaces and 2 bicycle parking spaces would be provided throughout the project site.

2.2.2 Open Space and Landscaping

The proposed project would include a total of 16,545 square feet of landscaping on the project site. The majority of the landscaping would be around the perimeter of the project site and would consist of trees, shrubs, and groundcover. Approximately 54 trees would be planted as a part of the proposed project, for a net total of 64 trees on the site. A total of 2,690 square feet of bio-retention basins would be provided on site in the southeast and southwest corners of the project site. Additionally, the project applicant would provide the City with an easement over the existing PG&E easement for a future pedestrian trail.

2.2.3 Utilities and Infrastructure

The project site is located in an urban area and is currently served by existing utilities, including: water, sanitary sewer, storm drainage, electricity, and telecommunications. Existing and proposed utility connections are discussed below.



LSA

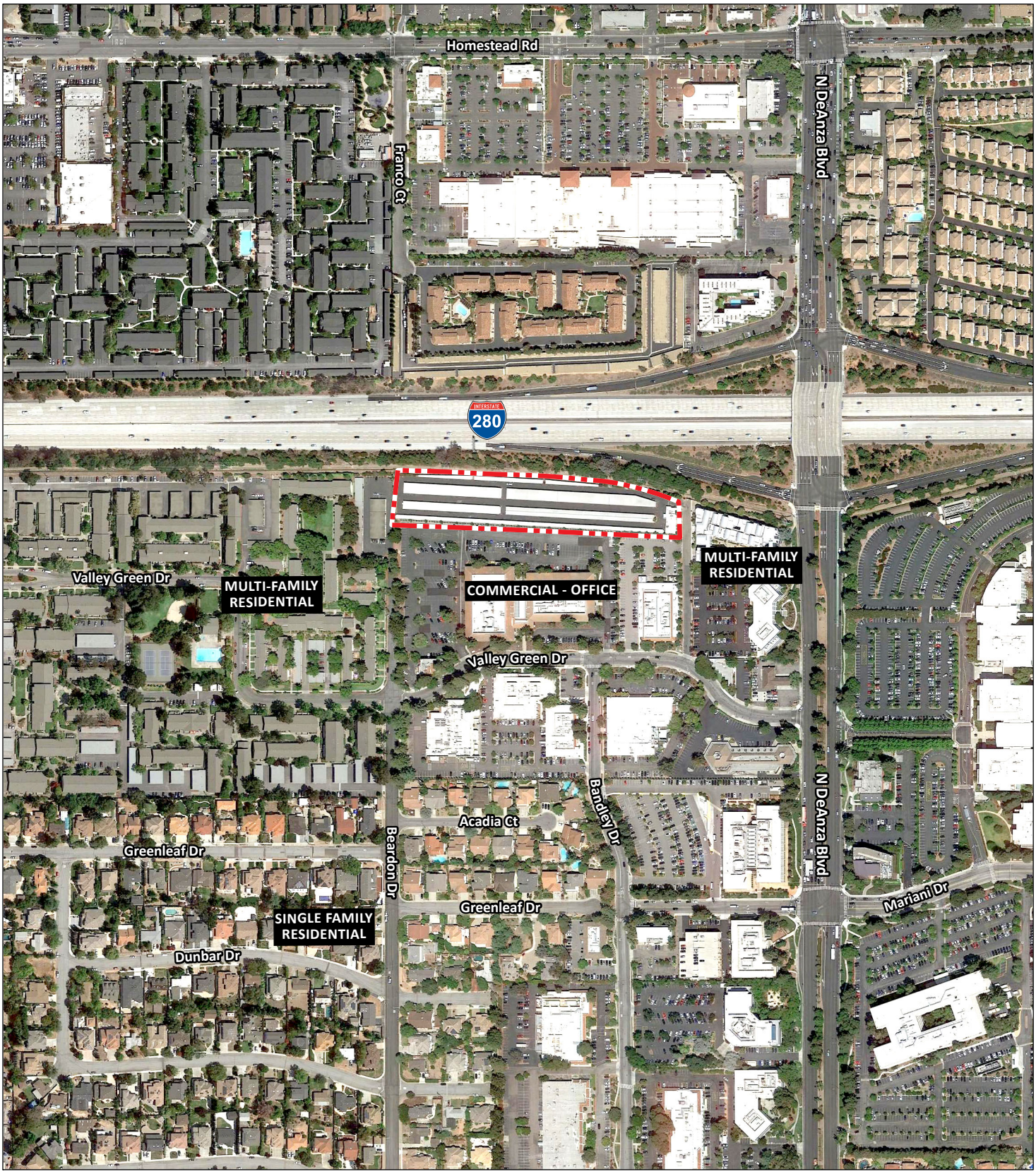
FIGURE 2-1

Cupertino Public Storage Project

Project Location and Regional Vicinity Map

SOURCE: National Geographic (c) 2018; ESRI World Street Map (c) 2018.

Q:\COC1803 Cupertino Public Storage\PRODUCTS\g\figures\Fig_2-1_Project Location.ai (12/03/18)



LSA

FIGURE 2-2

N

0 250 500

FEET

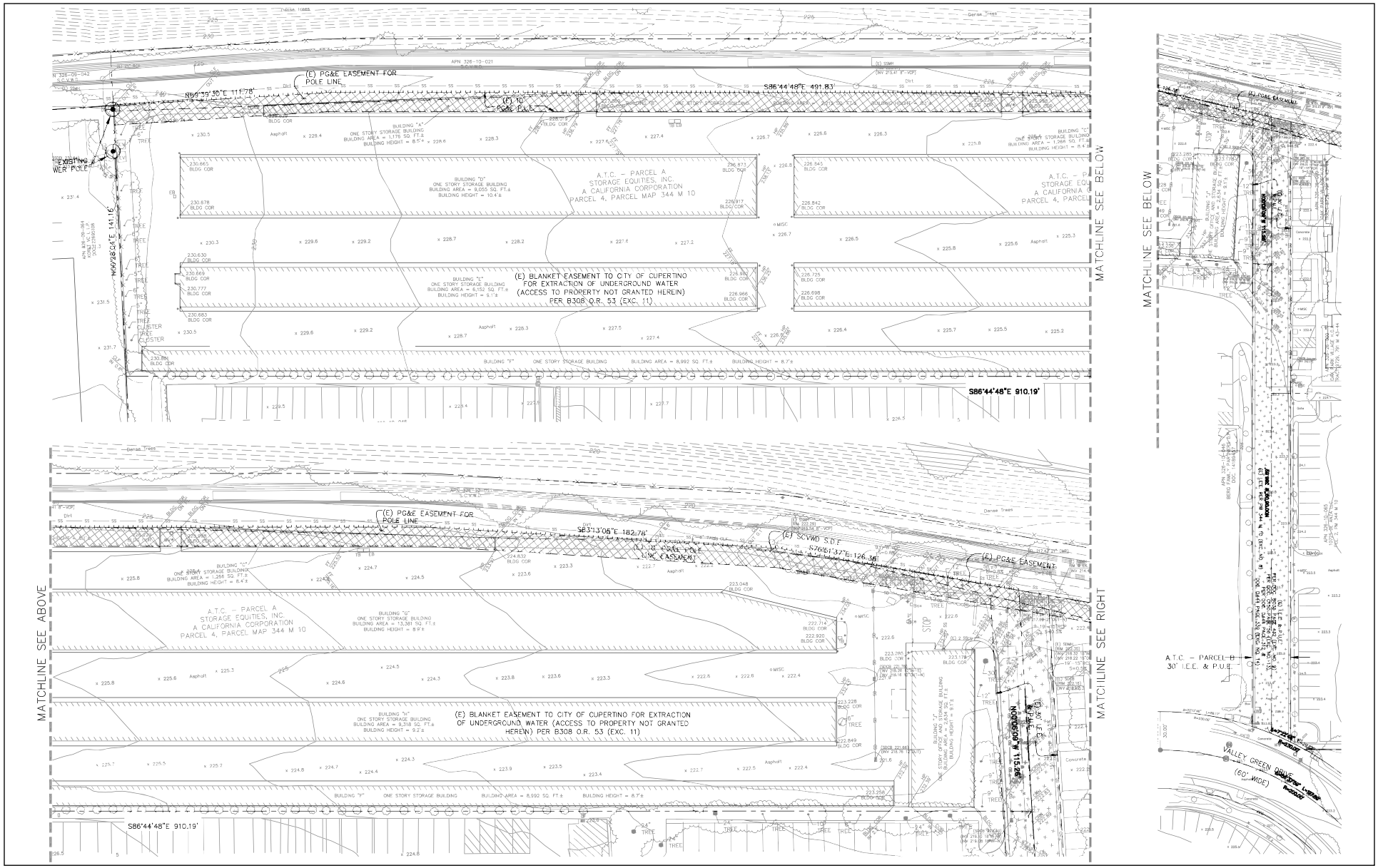
Project Site

Cupertino Public Storage Project

Aerial Photograph of the Project Site and Surrounding Land Uses

SOURCES: GOOGLE EARTH, 8/9/18; LSA 2018.

Q:\COC1803 Cupertino Public Storage\PRODUCTS\g\figures\Fig_2-2_Aerial Photograph.ai (1/24/19)



LSA

FIGURE 2-3

0 60 120
FEET

N

LEGEND

PROPERTY LINE

EXISTING EASEMENT LINE

30' I.E.E. AND P.U.E.

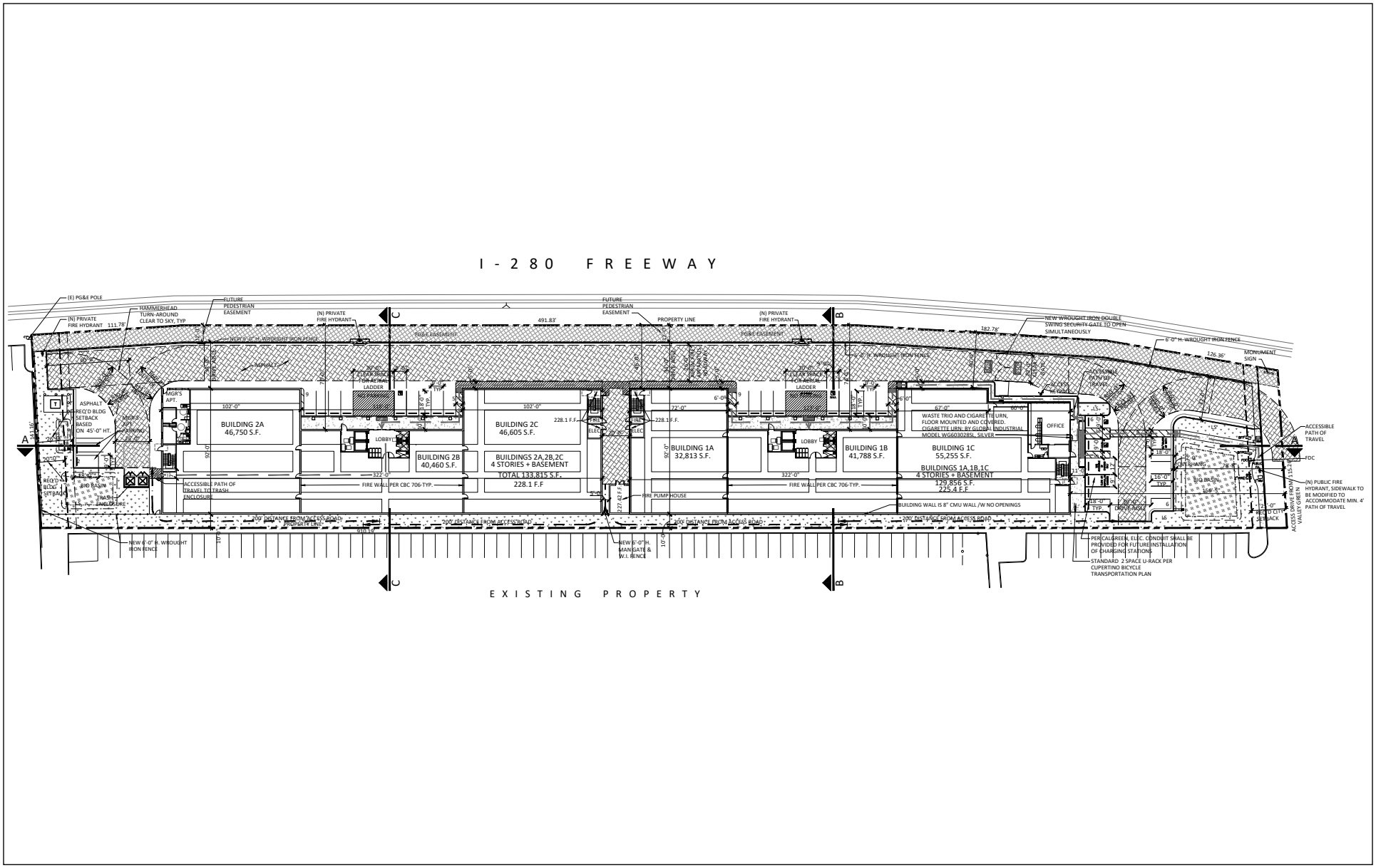
10' PG&E EASEMENT

PG&E POWER POLE

Cupertino Public Storage Project
Existing Site Conditions

SOURCE: BKF, NOVEMBER 2017.

Q:\COC1803 Cupertino Public Storage\PRODUCTS\g\figures\Fig_2-3_Existing Site Conditions.ai (1/24/19)



LSA

FIGURE 2-4

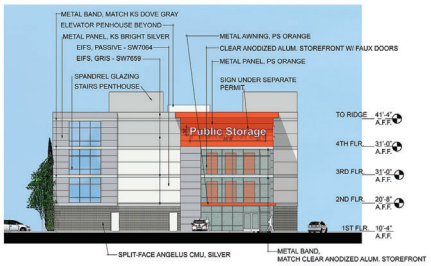
0 30 60
FEET

N

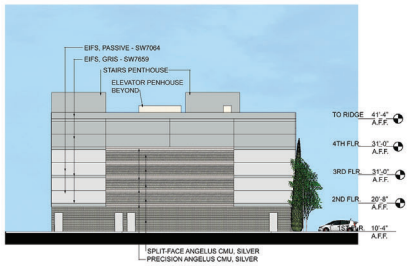
Cupertino Public Storage Project
Conceptual Site Plan

SOURCE: KSP STUDIO, NOVEMBER 2018.

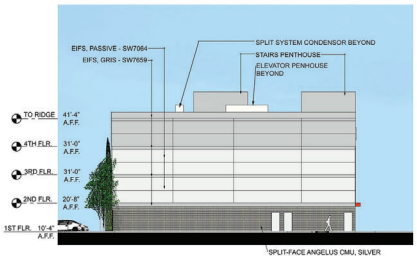
Q:\COC1803 Cupertino Public Storage\PRODUCTS\g\figures\Fig_2-4_Conceptual Site Plan.ai (1/24/19)



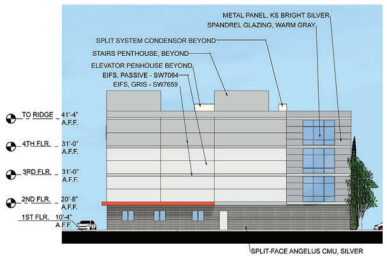
BUILDING 1 - EAST ELEVATION



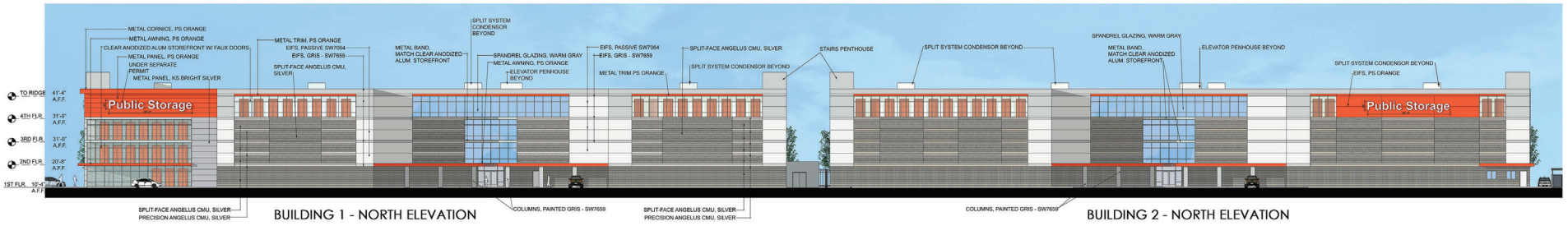
BUILDING 1 - WEST ELEVATION



BUILDING 2 - EAST ELEVATION



BUILDING 2 - WEST ELEVATION



BUILDING 1 - NORTH ELEVATION

BUILDING 2 - NORTH ELEVATION

BUILDING 2 - SOUTH ELEVATION

BUILDING 1 - SOUTH ELEVATION

LSA

FIGURE 2-5

NOT TO SCALE

SOURCE: KSP STUDIO, NOVEMBER 2018.

Cupertino Public Storage Project
Conceptual Building Elevations

Q:\COC1803 Cupertino Public Storage\PRODUCTS\g\figures\Fig_2-5_Conceptual Building Elevations.ai (1/24/19)

This page intentionally left blank

2.2.3.1 Water

California Water Service (Cal Water) provides water service to the project site. Water service to the project site would be provided by the existing water line within the private alley to the east via two 6-inch connections for fire water, and 2-inch connections for domestic and irrigation water. The existing buildings on the project site use an average of approximately 125 gallons per day (gpd) of water.

2.2.3.2 Wastewater

Cupertino Sanitary District provides wastewater service to the project site. Wastewater generated at the project site would be collected by the existing 8-inch sanitary sewer line located just north of the project site via a new connection to the project site. The existing buildings on the project site generate approximately 112 gpd of wastewater.

2.2.3.3 Stormwater

Approximately 124,411 square feet (95 percent) of the 130,462-square-foot site is currently covered with impervious surfaces and 6,043 square feet is covered with pervious surfaces. Development of the proposed project would result in a combination of new and replacement impervious surfaces, as well as new and replacement impervious surfaces. Overall, the area of impervious surfaces on the site would be reduced to 113,599 square feet (87 percent of the current impervious surfaces), and pervious surfaces would be increased to 16,855 square feet (13 percent of the current pervious surfaces). Aside from the future pedestrian easement areas, all stormwater would be treated on-site in the three bio-retention basins.

2.2.3.4 Electricity

Electrical service to the site is provided by PG&E. An existing electrical line runs along the northern boundary of the project site. Electric service to the project site would be provided via a transformer in the northwestern corner of the project site that would connect to the existing electrical lines.

2.2.4 Demolition, Grading, and Construction

To prepare the project site for construction, all nine of the existing buildings would be demolished and 17 trees would be removed. The project site would be excavated down to a depth of approximately 12 feet below the existing ground surface for the basements of both of the proposed buildings. Additionally, trenching for utility installation would occur. A total of 24,250 cubic yards of soil would be excavated from the project site, 1,250 cubic yards of which would be kept on site and 23,000 cubic yards of which would be off-hauled. Project construction is estimated to begin in April 2020 and would occur over a 13-month period.

2.3 PROJECT APPROVALS

A number of permits and approvals would be required for the proposed project. While the City is the CEQA Lead Agency for the project, other agencies also have discretionary authority related to the project and approvals. A list of these agencies and potential permits and approvals that may be required is provided in Table 2.A.

Table 2.A: Potential Permits and Approvals

Lead Agency	Potential Permits/Approvals
City of Cupertino	● CEQA Categorical Exemption and Streamlined Review ● Development Permit ● Architectural and Site Approval ● Tree Removal Permit ● Fence Exception ● Provision of grading, demolition, construction, and Stormwater Pollution Prevention Plan permits and approvals
Other Agencies	
Pacific Gas and Electricity	● Connection/Reconnection of utilities
California Water Service	● Water meter connections
Cupertino Sanitary District	● Sanitary sewer line connections

Source: LSA (2019).

3.0 EXEMPTIONS

Article 19 of the CEQA Guidelines includes, as required by Public Resources Code Section 21084, a list of classes of projects which have been determined not to have a significant effect on the environment and, as a result, are exempt from review under CEQA. This document has been prepared to serve as the basis for compliance with CEQA as it pertains to the proposed project, and to demonstrate that the project qualifies for a CEQA Exemption as an Infill Development Project, consistent with the provisions of CEQA Guidelines Sections 15332 and 15300.2. Specifically, the information provided herein shows that:

a. The project qualifies for an exemption under CEQA Guidelines Section 15332 (i.e., Class 32) and, as a result, would not have a significant effect on the environment;

b. No exceptions to the infill exemption, as identified in CEQA Guidelines Section 15300.2, apply to the proposed project.

CEQA Guidelines Section 15332 is applicable to projects characterized as infill development meeting the following conditions:

a. The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

c. The project site has no value as habitat for endangered, rare or threatened species.

d. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

e. The site can be adequately served by all required utilities and public services.

The analysis below concludes, based on substantial evidence that the project qualifies for a categorical exemption under CEQA Guidelines Section 15332 (e.g., Class 32) and, as a result, would not have a significant effect on the environment. In addition, the analysis shows that none of the exceptions identified in CEQA Guidelines Section 15300.2 apply; therefore, the proposed project is categorically exempt from CEQA review.

3.1 CRITERION SECTION 15332(A): GENERAL PLAN AND ZONING CONSISTENCY

The proposed project is consistent with the applicable general plan designation and all applicable general plan policies, as well as with the applicable zoning designations and regulations, as discussed below.

3.1.1 General Plan

The project site is designated Industrial/Residential in the City of Cupertino General Plan.[3] The General Plan intends for this site to consist of primarily industrial uses and secondarily residential uses, or a compatible combination of the two. Industrial use refers to manufacturing, assembly, and research and development. Administrative offices that support manufacturing and wholesaling are included.

The proposed project would result in the demolition of the existing public storage buildings on the project site and construction of two new four-story self-storage buildings. The proposed project meets the requirements of the industrial use that is permitted in the applicable zoning designation, as shown below, under the Industrial/Residential land use designation. The proposed project is generally the same as the existing use on the site, which is also a public storage facility, but with the addition of one caretaker residential unit. The proposed project is also within the 45-foot height limit established in the General Plan for this land use designation. Therefore, the proposed project would be consistent with the site's General Plan designation.

3.1.2 Zoning

The project site is zoned Planned Development with General Commercial, Light Industrial, and Residential Intent (P [CG, ML, RES]) on the City of Cupertino Zoning Map.[4] Permitted uses within the P (CG, ML, RES) district include all uses permitted within the CG, ML, and RES zoning districts. Permitted uses within the CG zoning district include retail, commercial offices, and personal services. Permitted uses within the ML district include automotive service stations, manufacturing, warehouses, and wholesale and storage activities. Permitted uses within RES zoning districts include single- and multi-family residences.

As stated above, the proposed project would result in the demolition of the existing public storage buildings on the project site and construction of two new four-story self-storage buildings. The Zoning Code does not identify self-storage as a separate use, so it falls under wholesale and storage activities. Wholesale and storage activities are allowed in the ML district; therefore, the proposed project would be permitted within the P (CG, ML, RES) zoning district. In addition, the proposed project is generally the same as the existing use on the site, which is also a public storage facility, but with the addition of one caretaker residential unit. As stated above, the proposed project would be within the maximum height allowed for the project site in the General Plan, which is 45 feet. Therefore, the proposed project would be consistent with the site's zoning designation.

3.2 CRITERION SECTION 15332(B): PROJECT LOCATION, SIZE, AND CONTEXT

The proposed project is located within City limits on a project site of no more than 5 acres and the site is substantially surrounded by urban uses, including apartment homes, office buildings, I-280, and restaurants.

[3] Cupertino, City of, 2015, op. cit.
[4] Cupertino, City of, 2018, op. cit.

The project site is located within the incorporated limits of the City of Cupertino on a 3-acre site. The project site is currently developed with nine single-story storage buildings and is surrounded by properties with urban land uses and paved public streets (see Figure 2-2). Therefore, the proposed project meets the criteria of CEQA Guidelines Section 15332(b).

3.3 CRITERION SECTION 15332(C): ENDANGERED, RARE, OR THREATENED SPECIES

The project site has no value as habitat for endangered, rare, or threatened species. The project site is developed and consists of two self-storage buildings, drive aisles, ruderal vegetation, and 17 trees, which would be removed as a part of the proposed project. No existing buildings that could potentially provide habitat for special-status bats would be removed as a part of the proposed project.

Migratory birds, which are protected under the Migratory Bird Treaty Act, may use vegetation, including existing trees, on or near the project site for nesting. Implementation of the following standard condition of approval would ensure that potential impacts to nesting birds and raptors during construction would be less than significant:

a. Construction and tree removal/pruning activities shall be scheduled to avoid the nesting season to the extent feasible. If feasible, tree removal and/or pruning shall be completed before the start of the nesting season to help preclude nesting. The nesting season for most birds and raptors in the San Francisco Bay area extends from February 1 through August 31.

b. If it is not possible to schedule construction activities between September 1 and January 31, then a qualified ornithologist shall conduct a preconstruction survey to identify active bird nests that may be disturbed during project construction. This survey shall be completed no more than seven days prior to the initiation of demolition/construction activities (including tree removal and pruning). During this survey, the ornithologist shall inspect all trees and other possible nesting habitats in and immediately adjacent to the construction areas for nests.

c. If the survey does not identify any nesting birds that would be affected by construction activities, no further mitigation is required. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist (in consultation with the California Department of Fish and Wildlife) shall designate a construction-free buffer zone (typically 300 feet for raptors and 100 feet for non-raptors) to be established around the nest to ensure that no nests of species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code will be disturbed during construction activities. The buffer shall remain in place until a qualified ornithologist has determined that the nest is no longer active.

d. A final report on nesting birds and raptors, including survey methodology, survey date(s), map of identified active nests (if any), and protection measures (if required), shall be submitted to the Planning Manager, through the building permit review process, and be completed to the satisfaction of the Community Development Director prior to the start of grading.

For the reasons stated above, and with compliance with the standard condition of approval protecting nesting birds listed above, the proposed project meets the criteria of CEQA Guidelines Section 15332(c).

3.4 CRITERION SECTION 15332(D): TRAFFIC, NOISE, AIR QUALITY OR WATER QUALITY

Relative to CEQA Guidelines Section 15332(d), the following provides a discussion demonstrating that the proposed project would not result in a significant effect on traffic, noise, air quality and water quality, and that the project adheres to the CEQA Guidelines Section 15332(d) criterion.

3.4.1 Traffic, Parking, Access and Circulation

The proposed project would result in the demolition of the existing self-storage buildings on the project site and the construction of two new self-storage buildings. Trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, were used to estimate the daily and peak hour trip generation for the proposed project.

Table 3.A below summarizes the trip generation for the proposed project. As presented in Table 3.A, the existing self-storage use on the site generates approximately 82 daily trips, with 5 occurring in the AM peak hours and 9 occurring in the PM peak hour. The trip generation potential of the proposed project would be higher than for the existing use on the site. The net increase would be 316 daily trips, with 22 additional trips occurring in the AM peak hour and 36 additional trips occurring in the PM peak hour. The new trips generated by the proposed project would result in a net increase of less than 100 trips during the AM and PM peak hours; therefore, as identified in the Trip Generation Analysis prepared for the proposed project,[5] which is included as Appendix A, the new level of project-generated traffic would not be considered significant.

Table 3.A: Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Mini-Warehouse (Self-Storage)[2]		TSF	1.51	0.06	0.04	0.10	0.08	0.09	0.17
Existing Trip Generation									
Self-Storage	54.186	TSF	82	3	2	5	4	5	9
Project Trip Generation									
Self-Storage	263.671	TSF	398	16	11	27	21	24	45
Net New Trip Generation			**316**	**13**	**9**	**22**	**17**	**19**	**36**

Source: LSA (2018).
[1] Trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 10th Edition (2017).
[2] Land Use Code (151) - Mini Warehouse
ADT = average daily traffic
TSF = thousand square feet

[5] LSA Associates, Inc., 2018. *Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California*. December 17.

The project site is located in northern Cupertino and would be readily accessible to pedestrians, bicyclists, and transit users, although given the nature of the proposed development; site users are primarily expected to access the site via automobile. The proposed project's driveway and surface-level parking would be adequate to serve the project's vehicular traffic. Regional access to the project site is provided from I-280. Vehicular access to and from the project site would not change from existing conditions.

Public access to the projects site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately .50 miles from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations. The proposed project would not make major modifications to the existing pedestrian facilities at the project site.

Implementation of the proposed project would not substantially increase the daytime population at the project site resulting in a large number of vehicular trips and, therefore would not result in changes to the City's transportation and circulation system that could conflict with adopted policies, plans, or programs regarding transit, bicycle, or pedestrian facilities. The proposed project would not otherwise decrease the performance or safety of such facilities, or cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity or alternative travel modes.

3.4.2 Noise

The following is based on the Noise Analysis prepared for the proposed project, which is included in Appendix C.[6]

A project will normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or conflict with the adopted environmental plans and goals of the community in which it is located. Noise impacts can be described in three categories. The first is audible impacts that increase noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 decibels (dB) or greater since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, is the change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

For the purpose of this analysis, the proposed project creates a significant noise impact if the project-related noise increase at an existing sensitive receptor is greater than 3 dB and the resulting noise level is greater than the standards cited below or if the project-related increase in noise is greater than 5 A-weighted decibels (dBA).

Certain land uses are considered more sensitive to noise than others. Examples of these land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The

6 LSA Associates, Inc. 2019. *Noise Analysis – Cupertino Public Storage Project.* February 5.

closest sensitive receptors to the project site are the multi-family residences located adjacent to the western border of the project site and the multi-family residences located approximately 75 feet east of the eastern border of the project site.

To assess existing noise levels, LSA conducted noise monitoring to establish the existing ambient noise environment at the project site. Three short-term (15-minute) and one long-term (24-hour) noise measurements were conducted at the project site from Friday, January 25, 2019, to Tuesday, January 29, 2019. The short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 56.5 dBA to 62.6 dBA L_{eq}. The long-term measurement resulted in a daily noise level of 69.2 dBA CNEL. Vehicle traffic on I-280 was reported as the primary noise source.

The Health and Safety Element of the City's General Plan[7] seeks to ensure that the community continues to enjoy a high quality of life through reduced noise pollution, effective project design and noise management operations. The Health and Safety Element identifies the City's land use compatibility guidelines for determining acceptable noise levels for specified land uses, as shown in Table 3.B.

The City of Cupertino further addresses noise in the Municipal Code in Chapter 10.48, Community Noise Control. Section 10.48.040 establishes the acceptable daytime and nighttime maximum noise levels at receiving land uses. As shown in Table 3.C below, the maximum permissible noise level (as measured at receiving sensitive land uses) that may be generated by sources on a nonresidential land use is 55 dBA during nighttime hours and 65 dBA during daytime hours. The maximum permissible noise level that may be generated by sources on a residential land use is 50 dBA during nighttime hours and 60 dBA during daytime hours. Daytime hours are defined to be the period from 7:00 a.m. to 8:00 p.m. on weekdays, and from 9:00 a.m. to 6:00 p.m. on weekends.

[7] Cupertino, City of, 2015. *Cupertino General Plan 2015-2040*. October 20.

Table 3.B: Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dB) 55	60	65	70	75	80
Residential – Low Density (Single-Family, Duplex, Mobile Homes)	Normally Acceptable			Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Multi-Family	Normally Acceptable			Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Transient Lodging (Motels, Hotels)	Normally Acceptable			Normally Unacceptable		Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable			Normally Unacceptable		Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Conditionally Acceptable		Clearly Unacceptable			
Sports Arena, Outdoor Spectator Sports	Conditionally Acceptable			Clearly Unacceptable		
Playgrounds, Neighborhood Parks	Normally Acceptable			Normally Unacceptable	Clearly Unacceptable	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable			Normally Unacceptable		Clearly Unacceptable
Office Buildings, Business Commercial and Professional Centers	Normally Acceptable			Normally Unacceptable		
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable			Normally Unacceptable		

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.	*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.
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.	*Clearly Unacceptable* New construction or development should generally not be undertaken.

Source: Cupertino, City of (2015). *Cupertino General Plan 2015-2040.* Figure HS-8.

Table 3.C: City of Cupertino 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 Section 10.48.040 (2018).

In addition, 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 20 dBA in a two-hour period. Table 3.D shows example combinations of allowable noise level exceedances.

Table 3.D: City of Cupertino Example 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 Section 10.48.050 (2018).

According to Section 10.48.051 of the Municipal Code, the use of motorized equipment for landscape maintenance activities is limited to the hours of 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 for the proposed project. 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 for "only the minimal period necessary."

According to Section 10.48.053 of the Municipal Code, noise from grading, construction, and demolition activities is also allowed to exceed the maximum permissible noise limits described above (with examples given in Table 3.D), 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 L_{max} (maximum instantaneous noise level) as measured at a distance of 25 feet; or
- The operation of such equipment does not produce noise levels that exceed 80 dBA L_{max} 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 (which include New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). 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.

3.4.2.1 Generation of Substantial Increase in Ambient Noise Levels

The following section describes how the short-term construction and long-term operational noise impacts of the proposed project would be less than significant.

Short-Term Construction Noise Impacts. As described above, noise from grading, construction, and demolition activities may exceed the maximum permissible noise limits (shown in Table 3.D), 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 L_{max} as measured at a distance of 25 feet; or

- The operation of such equipment does not produce noise levels that exceed 80 dBA L_{max} as measured at any nearby property.

In addition, construction noise is permitted by the City of Cupertino when activities occur between daytime hours on weekdays (daytime hours are defined to be the period from 7:00 a.m. to 8:00 p.m. on weekdays). Construction noise is prohibited on Saturdays, Sundays, and holidays when construction activities occur within 750 feet of a residential area. In addition, construction noise is prohibited during nighttime periods unless it meets the nighttime standards shown in Table 3.C.

Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts would generally be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table 3.E lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels in the vicinity of the project site but would no longer occur once construction of the project is completed.

Table 3.E: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 3.E, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during grading and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

As shown in Table 3.E, typical maximum noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest

construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

As discussed above, the proposed project must implement best management noise reduction practices, including, but not limited to, meeting at least one of the following criteria: no individual device produces a noise level of more than 87 dBA L_{max} as measured at a distance of 25 feet; or the operation of such equipment does not produce noise levels that exceed 80 dBA L_{max} as measured at any nearby property.

As shown in Table 3.E, typical maximum noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. At a distance of only 25 feet from the operating equipment, noise levels would be approximately 6 dBA higher than those listed in the table. Therefore, typical maximum noise levels generated by almost all of the types of heavy construction equipment listed in the table would exceed 87 dBA L_{max} at 25 feet from the operating equipment. Therefore, this analysis focuses on whether noise from multiple pieces of heavy construction equipment operating simultaneously near the project borders would result in noise levels in excess of the City's standard of 80 dBA L_{max} as measured at nearby receiving properties.

As noted above, the closest sensitive receptors to the project site are the multi-family residences located immediately west of the project site and the multi-family residences located approximately 75 feet east of the eastern border of the project site. Due to proposed building setbacks and the proposed bio-retention basin, the residences that would be closest to major building construction activities would be the multi-family residences immediately west of the project site. The property lines of these sensitive receptors are located immediately adjacent to the project site; however the area adjacent to the project site includes a parking lot and carports. The nearest residential buildings are located approximately 125 feet west of the project site. At 125 feet, there would be a decrease of approximately 8 dBA from the increased distance compared to the noise level measured at 50 feet from the active construction area. Therefore, the closest sensitive receptor may be subject to short-term maximum construction noise reaching 79 dBA L_{max} during construction. Therefore, construction noise levels as measured at the nearest façade of noise sensitive land uses would below the City's threshold of 80 dBA L_{max}. In addition, construction equipment would operate at various locations within the 3-acre project site and would only generate this maximum noise level when operations occur closest to the receptor.

As discussed above, construction noise may exceed the maximum permissible noise limits, provided that the equipment utilized is outfitted with high-quality mufflers and abatement devices and is in good condition. Consistent with the Municipal Code, the following construction best management practices will be implemented:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.

- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.

- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.

Ensure that all general construction related activities are restricted to between the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday. Construction shall be prohibited on Saturdays, Sundays, and holidays, and during the nighttime period.

Long-Term Noise Impacts. The proposed project would include the demolition of existing self-storage buildings and would construct two new four-story self-storage buildings in a developed area of the City. Operational noise can be categorized as mobile source noise and stationary source noise. Mobile source noise would be attributable to the additional trips that would occur with implementation of the proposed project. Stationary source noise includes noise generated by the proposed project, such as storage loading/unloading activities and heating, ventilation, and air conditioning (HVAC) equipment.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity. A characteristic of sound is that a doubling of a noise source is required in order to result in a perceptible (3 dBA or greater) increase in the resulting noise level.

Based on the Trip Generation Memorandum[8] prepared for the proposed project, the proposed project would generate a maximum of approximately 316 net new average daily trips, with approximately 22 trips occurring in the AM peak hour and approximately 36 trips occurring in the PM peak hour. The adjacent I-280, which is the predominant source of noise in the vicinity of the project site, carries approximately 146,000 average daily trips.[9] Project trips would represent a small increase in noise level, approximately 0.01 dBA CNEL based on the following equation:

8 LSA, 2019. *Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California*. January 25.

9 Caltrans, 2017. *2017 Traffic Volumes.* Website: www.dot.ca.gov/trafficops/census (accessed January 2019).

$$Change\ in\ (dBA) = 10 * \log_{10}\left(\frac{Current\ Volume}{\text{Future Volume}}\right)$$

Therefore, project daily trips would not result in a perceptible noise increase along any roadway segment in the project vicinity and this impact would be less than significant.

Stationary Source Noise Impacts. As described above, the City of Cupertino has established maximum permissible noise levels that may be generated by a nonresidential land use. These maximum levels are 55 dBA during nighttime hours and 65 dBA during daytime hours, as measured at a receiving sensitive land use. (Daytime hours are defined to be the period from 7:00 a.m. to 8:00 p.m. on weekdays, and from 9:00 a.m. to 6:00 p.m. on weekends.) The maximum permissible noise level that may be generated by a residential land use is 50 dBA during nighttime hours and 60 dBA during daytime hours.

The proposed public storage uses would contain stationary noise sources such as storage loading/unloading activities and HVAC equipment. These are potential point sources of noise that could affect noise-sensitive receptors in the project site vicinity.

Customer Vehicle Access Activities. The proposed project would contain self-storage uses, therefore, vehicle noise, including engine sounds, car doors slamming, car alarms, music, and people conversing, could occur as a result of the proposed project. Typical vehicle access activities, such as people conversing or doors slamming, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet.

Intensity of operation of the proposed project may increase due to the higher number of storage units; however, these operations would be internal to the new buildings and would not contribute to the exterior noise environment at the surrounding receptors. Therefore, noise levels due to customer vehicle activities are anticipated to remain similar to existing conditions.

HVAC Equipment. HVAC equipment could be a primary noise source associated with the proposed project as the project would be a climate-controlled facility. HVAC equipment is often mounted on rooftops, located on the ground, or located within mechanical rooms. The noise sources could take the form of fans, pumps, air compressors, chillers, or cooling towers. HVAC operations would be required to meet all noise standards.

Precise details of HVAC equipment, including future location and sizing, are unknown at this time; therefore, for purposes of this analysis, 75 dBA at 3 feet was assumed to represent HVAC-related noise.[10] The nearest sensitive receptors to proposed buildings include the multi-family residences located adjacent to the western border of the project site, which would be located approximately 200 feet west of Building 2. Adjusted for distance to the nearest off-site sensitive receptors, these residences would be exposed to a noise level of 39 dBA L_{max} generated by HVAC equipment. This noise level would not exceed the City's maximum noise level standards of 55 dBA during nighttime hours and 65 dBA during daytime hours, as measured at the nearest receiving sensitive land use.

10 Trane, 2002. *Sound Data and Application Guide for the New and Quieter Air-Cooled Series R Chiller*.

3.4.2.2 Generation of Excessive Groundborne Vibration

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is therefore assumed that no such vehicular vibration impacts would occur and no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate groundborne vibration.

Construction Vibration. Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Due to distance attenuation, the multi-family residences located east of the project site would experience vibration levels of up to 73 VdB (0.017 PPV [in/sec]), the multi-family residences located west of the project site would experience vibration levels of up to 63 VdB (0.008 PPV [in/sec]), and the commercial buildings to the south would experience vibration levels of up to 66 VdB (0.008 PPV [in/sec]). These vibration levels at the nearest buildings from construction equipment would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. Although construction vibration levels at the nearest buildings would have the potential to result in annoyance, these

vibration levels would no longer occur once construction of the project is completed. Therefore, groundborne vibration impacts from construction activities associated with the proposed project would not be considered significant.

3.4.2.3 Aircraft Noise Impacts

The proposed project is not located within 2 miles of a public or public use airport. The San Jose International Airport is the closest airport and is located approximately 5.7 miles northeast of the project site. Aircraft noise is occasionally audible at the project site; however, no portion of the project site lies within the 65 dBA CNEL noise contours of any public airport nor does any portion of the project site lie within 2 miles of any private airfield or heliport. Therefore, the proposed project would not result in the exposure of people residing or working in the project area to excessive noise levels associated with the proximity of an airport.

3.4.2.4 Land Use Compatibility

The proposed project would include a manager's apartment in the northwest corner of Building 2. The General Plan contains noise level standards for land use compatibility and interior noise exposure of new development. According to the General Plan, noise levels below 60 dBA CNEL are considered satisfactory for residential land uses and do not require special insulation requirements. Exterior noise levels between 55 and 70 dBA CNEL require an analysis of noise reduction requirements and noise insulation as needed. For areas with noise levels between 70 dBA CNEL and 80 dBA CNEL, residential land use 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. In addition, for areas with noise levels over 70 dBA CNEL, residential land use development should not be undertaken. The interior noise level standard for residential land uses is 45 dBA CNEL.

In addition, according to the City's General Plan, noise levels below 75 dBA CNEL are considered satisfactory for industrial land uses and do not require special insulation requirements. Noise levels between 70 and 75 dBA CNEL require an analysis of noise reduction requirements and noise insulation as needed. For areas with noise levels over 75 dBA CNEL, industrial land use development should generally be discouraged.

The noise environment at the project site is dominated by vehicle traffic noise from I-280. Based on the long-term noise monitoring, noise levels on the project site are approximately 69.2 dBA CNEL. Based on the City's noise and land use compatibility standards (Figure HS-8 of the General Plan), this noise level is considered normally acceptable for industrial development and conditionally acceptable for residential land uses. Based on the City's noise and land use compatibility standards, new residential construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. An interior and exterior noise analysis for the proposed manager's apartment is provided below.

Interior Noise Analysis. Based on the USEPA's Protective Noise Levels,[11] with a combination of walls, doors, and windows, standard construction for Northern California buildings (STC-24 to STC-28) would provide more than 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the manager's apartment would not meet the City's interior noise standard of 45 dBA CNEL (i.e., 69.2 dBA – 15.0 dBA = 54.2 dBA) for residential land uses. Therefore, an alternate form of ventilation, such as an air-conditioning system, would be required to ensure that windows can remain closed for a prolonged period of time. The proposed project would include an HVAC system, which would allow windows in the manager's apartment to remain closed and would meet the City's interior noise level criterion of 45 dBA CNEL (i.e., 69.2 dBA – 25.0 dBA = 44.2 dBA). Therefore, the proposed project would meet the City's interior noise standard of 45 dBA CNEL.

Exterior Noise Analysis. As identified above, noise levels on the project site are approximately 69.2 dBA CNEL. Based on the City's noise and land use compatibility standards, this noise level is within the City's normally acceptable noise level of below 75 dBA CNEL for industrial land uses and within the City's conditionally acceptable noise level of 60 to 70 dBA CNEL for residential land uses. Based on the City's noise and land use compatibility standards (Figure HS-8 of the General Plan), new residential construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Therefore, the measured existing on-site noise level of 69.2 dBA would meet the City's exterior noise level standards for residential land uses if noise reduction requirements and noise insulation features are included in the design to meet the interior noise standard. As discussed above, the proposed project would include an HVAC system, which would allow windows in the manager's apartment to remain closed, resulting in a noise level of 44.2 dBA, which and would meet the City's interior noise level criterion of 45 dBA CNEL. Since interior noise levels would meet City standards, the proposed project would meet the City's exterior land use compatibility standards for residential land uses. Therefore, the proposed project would meet the City's exterior land use compatibility standards for both residential and industrial land uses. This impact would be less than significant.

3.4.3 Air Quality

The proposed project is located in the City of Cupertino, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Cupertino, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

[11] U.S. Environmental Protection Agency, 1978. *Protective Noise Levels, Condensed Version of EPA Levels Document*. November.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal $PM_{2.5}$ 24-hour standard.

The following is based on the Air Quality and Greenhouse Gas Analysis prepared for the proposed project, which is included in Appendix B.[12]

3.4.3.1 Consistency with Applicable Air Quality Plans

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan, which was adopted on April 19, 2017. The 2017 Clean Air Plan/Regional Climate Protection Strategy serves as a roadmap for the BAAQMD to reduce air pollution and protect public health and the global climate. The 2017 Clean Air Plan also includes measures and programs to reduce emissions of fine particulates and toxic air contaminants. In addition, the Regional Climate Protection Strategy is included in the 2017 Clean Air Plan, which identifies potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gases throughout the Bay Area.

Consistency with the 2017 Clean Air Plan is determined by whether or not the proposed project would result in significant and unavoidable air quality impacts or hinder implementation of control measures (e.g., excessive parking or preclude extension of transit lane or bicycle path). As indicated in the analysis that follows, the proposed project would not result in significant operational and construction-period emissions. Therefore, the proposed project supports the goals of the Clean Air Plan and would not conflict with any of the control measures identified in the plan as designed to bring the region into attainment. Additionally, the project site is located in close proximity to a mix of existing uses, including residential, commercial, and office uses and would be readily accessible to pedestrians, bicyclists, and transit users. As stated in Section 3.4.1, above, regional access to the project site is provided via I-280. In addition, public access to the project site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately .50 miles from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations. In addition, the proposed project would provide bicycling parking spaces, which would promote BAAQMD initiatives to reduce vehicle trips and vehicle miles traveled and would increase the use of alternate means of transportation. The proposed project would not hinder the region from attaining the goals outlined in the Clean Air Plan. Therefore, the proposed project would not hinder or disrupt implementation of any control measures from the Clean Air Plan.

3.4.3.2 Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant

Air quality standards for the proposed project are regulated by the BAAQMD CEQA Air Quality Guidelines. According to the BAAQMD CEQA Air Quality Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the project must not:

[12] LSA Associates, Inc. 2019. *Air Quality and Greenhouse Gas Analysis – Cupertino Public Storage Project.* January 29.

- Contribute to CO concentrations exceeding the State ambient air quality standards;
- Generate average daily construction emissions of reactive organic gases (ROG), NO_x or $PM_{2.5}$ greater than 54 pounds per day or PM_{10} exhaust emissions greater than 82 pounds per day; or
- Generate average operational emissions of ROG, NO_x or $PM_{2.5}$ of greater than 10 tons per year or 54 pounds per day or PM_{10} emissions greater than 15 tons per year or 82 pounds per day.

The following sections describe the proposed project's construction- and operation-related air quality impacts and CO impacts.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Construction emissions were estimated for the project using the California Emissions Estimator Model (CalEEMod) version 2016.3.2, consistent with BAAQMD recommendations. Project construction would commence in April 2020 and would extend for approximately 13 months. Construction of the proposed project would include the demolition of on-site buildings totaling 54,186 square feet and off-haul of approximately 23,000 cubic yards of soil, which were included as inputs to CalEEMod. Other construction details are not yet known; therefore, default assumptions (e.g., construction fleet activities) from CalEEMod were used. Construction-related emissions are presented in Table 3.F.

Table 3.F: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	8.9	18.7	0.8	1.2	0.7	0.4
BAAQMD Thresholds	**54.0**	**54.0**	**54.0**	**BMP**	**82.0**	**BMP**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (2019).
BMP = best management practices

As shown in Table 3.F, construction emissions associated with the project would not exceed the thresholds for ROG, NO_x, $PM_{2.5}$, and PM_{10} exhaust emissions. The BAAQMD requires the implementation of the BAAQMD Basic Construction Mitigation Measures to reduce construction fugitive dust impacts as follows:

- 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 tracked-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.

- A publicly visible sign shall be posted with the telephone number and person to contact at the City of Cupertino 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.

Operational Air Quality Emissions. Long-term air pollutant emission impacts are those associated with area sources and mobile sources related to the proposed project. In addition to the short-term construction emissions, the project would also generate long-term air pollutant emissions, such as those associated with changes in permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as landscape equipment would also result in pollutant emissions.

Emission estimates for operation of the project were calculated using CalEEMod. Model results are shown in Table 3.G. Trip generation rates for the project were based on the project's trip generation estimates, as identified in the Trip Generation Memorandum.[13] Based on the Trip Generation Memorandum, the proposed project would generate approximately 316 net new average daily trips, with approximately 22 trips occurring in the AM peak hour and approximately 36 trips occurring in the PM peak hour.

The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project; emissions are released in other areas of the Air Basin (i.e., vehicles traveling to the project site would release emissions along roadways throughout the Air Basin and not specifically on the project site). The daily emissions associated with project operational trip generation, energy, and area

[13] LSA, 2017. *Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California*. December 11.

sources are identified in Table 3.G for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The results shown in Table 3.G indicate the project would not exceed the significance criteria for daily ROG, NO_2, PM_{10} or $PM_{2.5}$ emissions; therefore, the proposed project would not have a significant effect on regional air quality and mitigation would not be required.

Table 3.G: Project Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Pounds Per Day				
Area Source Emissions	6.4	0.0	0.0	0.0
Energy Source Emissions	0.2	1.9	0.1	0.1
Mobile Source Emissions	0.6	2.6	2.0	0.5
Total Emissions	**7.2**	**4.5**	**2.1**	**0.7**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	**No**	**No**	**No**	**No**
Tons Per Year				
Area Source Emissions	1.2	0.0	0.0	0.0
Energy Source Emissions	0.0	0.3	0.0	0.0
Mobile Source Emissions	0.1	0.5	0.3	0.1
Total Emissions	**1.3**	**0.8**	**0.4**	**0.1**
BAAQMD Thresholds	10.0	10.0	15.0	10.0
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: LSA (2019).

Localized CO Impacts. The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans;

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and

- The project 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, or below-grade roadway).

The proposed project would not conflict with standards established by the Santa Clara Valley Transportation Authority, which administers the applicable congestion management program, for designated roads and highways, a regional transportation plan, or other agency plans. The project site is not located in an area where vertical or horizontal mixing of air (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway) is substantially limited. As identified in the Trip Generation Memorandum, the proposed project would generate

approximately 316 net new average daily trips, with approximately 22 trips occurring in the AM peak hour and approximately 36 trips occurring in the PM peak hour. Therefore, the project's contribution to peak hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. Therefore, the proposed project would meet the screening criteria listed above, and would not result in localized CO concentrations that exceed State or federal standards.

3.4.3.3 Sensitive Receptors

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). A significant cumulative impact would occur if the project in combination with other projects located within a 1,000-foot radius of the project site would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient $PM_{2.5}$ increase greater than 0.8 $\mu g/m^3$ on an annual average basis. Impacts from substantial pollutant concentrations are discussed below. The Air Quality and Greenhouse Analysis Memorandum prepared for the project evaluated the health risk impacts associated with construction of the proposed project. **Error! Reference source not found.** identifies the results of the analysis.

Table 3.H: Inhalation Health Risks from Project Construction to Off-Site Receptors

Source	Carcinogenic Inhalation Health Risk (in a million)	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)	Chronic Inhalation Hazard Index
Maximum Exposed Individual Location	9.94	0.06	0.01
Threshold	**10.00**	**0.30**	**1.00**

Source: LSA (January 2019).

As shown in Table 3.H, the risk would be 9.94 in one million, which would not exceed the BAAQMD cancer risk of 10 in one million. The highest chronic hazard index would be 0.01, which would not exceed the threshold of 1.0. The results of the analysis indicate that the maximum $PM_{2.5}$ concentration would be 0.06 $\mu g/m^3$, which would not exceed the BAAQMD significance threshold of 0.30 $\mu g/m^3$. Once the project is constructed, the project would not be a source of substantial emissions. Therefore, construction and operation of the project would not exceed BAAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

3.4.3.4 Odors

During project construction, some odors may be created due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people.

3.4.4 Greenhouse Gas Emissions

While greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere, over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs, above, because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured compared to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

3.4.4.1 Generate Greenhouse Gas Emissions

This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change. The BAAQMD has not addressed emission thresholds for

construction in its CEQA Guidelines; however, the BAAQMD encourages quantification and disclosure. Thus, construction emissions are discussed in this section.

Construction Activities. Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed project would generate approximately 652.8 metric tons of CO_2e. Implementation of the BAAQMD Basic Construction Mitigation Measures (refer to Section 3.4.3.2) would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment. Therefore, project construction impacts associated with GHG emissions would be reduced to the extent feasible and as required by the BAAQMD.

Operational Emissions. Long-term operation of the proposed project would generate GHG emissions from area and mobile sources as well as indirect emissions from sources associated with energy consumption. Mobile-source GHG emissions would include project-generated vehicle trips associated with trips to the proposed project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources.

According to the BAAQMD CEQA Guidelines, if a project is consistent with an adopted qualified Greenhouse Gas Reduction Strategy that meets certain specified standards, it may be presumed that the project will not have significant cumulative greenhouse gas emission impacts. This approach is consistent with the State CEQA Guidelines, Section 15183.5(b), which states that "[p]ursuant to Sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with a previously adopted plan or mitigation program [for reduction of greenhouse gases]," and will be used in this analysis. The City's CAP meets the BAAQMD requirements for a Qualified Greenhouse Gas Reduction Strategy. Therefore, the proposed project's GHG emissions would not be considered a significant cumulative impact if the proposed project would be consistent with the City's CAP. The proposed project's consistency with the relevant CAP reduction measures is provided in **Error! Reference source not found.**.

In addition, the proposed project is consistent with the GHG inventory contained in the CAP. Both the existing and projected GHG inventory contained in the City's CAP were derived based on the land use designations and associated densities defined in the City's General Plan. The City of Cupertino General Plan Land Use Map designates the project site as Industrial/Residential which allows industrial uses and residential uses or a compatible combination of the two. Therefore, because the project is consistent with the City's General Plan, it is also consistent with the GHG

inventory contained in the CAP. As shown in Table 3.I**Error! Reference source not found.**, the proposed project would be consistent with the applicable CAP reduction measures.

Table 3.I: Consistency with Climate Action Plan Measures

Policy	Compliance	Discussion
Transportation and Land Use Strategy		
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.	Complies.	The project site is located in northern Cupertino and would be readily accessible to pedestrians, bicyclists, and transit users. In addition, the proposed project would provide bicycle parking.
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.	Complies.	The project site is located in northern Cupertino and would be readily accessible to pedestrians, bicyclists, and transit users. Regional access to the project site is provided via I-280. In addition, public access to the projects site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately .50 miles from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations.
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.	Complies.	Public access to the projects site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately .50 miles from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations.
Water Strategy Measures		
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.	Complies.	The proposed project would be required to comply with the Cupertino's Urban Water Management Plan.
Solid Waste Strategy Measures		
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.	Complies.	The proposed project would be required to comply with the City's Construction & Demolition Debris Diversion and Green Building Ordinances.

Table 3.I: Consistency with Climate Action Plan Measures

Policy	Compliance	Discussion
Green Infrastructure Strategy Measures		
Measure C-G-1: Urban Forest Program. Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.	Complies.	The proposed project would include a total of 16,545 square feet of landscaping on the project site. The majority of the landscaping would be around the perimeter of the project site and would consist of trees, shrubs, and groundcover. Approximately 54 trees would be planted as a part of the proposed project, for a net total of 64 trees on the site. A total of 2,690-square-feet of bio-retention basins would be provided on site in the southeast and southwest corners of the project site.

Source: LSA (2019).

3.4.5 Water Quality

The City, as a participant in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPP), which is regulated by the National Pollutant Discharge Elimination System (NPDES) Program, is committed to reducing the amount of pollutants entering waterways. Below is a discussion of the project's compliance with water quality standards.

3.4.5.1 Construction Related Water Quality Impacts

The proposed project would include the demolition of existing self-storage buildings and the construction of two new self-storage buildings on a 3-acre site. Runoff water quality is regulated by the NPDES Program. Locally, the NPDES Program is administered by the San Francisco Regional Water Quality Control Board (Regional Water Board). The proposed project would be required to comply with the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activity (Construction General Permit), because it would result in a disturbance of 1 acre or more, and the Regional Water Board Municipal Regional Permit (MRP), because it would replace more than 10,000 square feet of existing impervious surfaces.

In compliance with the Construction General Permit, the project applicant would be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) as a standard condition of project approval. Preparation and implementation of the SWPPP, as described in the standard condition of approval below, would ensure that potential adverse impacts to surface water quality throughout the construction period would not be significant.

> When and where it is required by the State Water Resources Control Board (State Water Board), the developer must obtain a Notice of Intent (NOI) from the State Water Board, which encompasses preparation of a Storm Water Pollution Prevention Plan (SWPPP), use of construction Best Management Practices (BMPs) to control storm water runoff quality, and BMP inspection and maintenance.

3.4.5.2 Operation Period Water Quality Impacts

The proposed project would include the demolition of existing self-storage buildings and construction of two new self-storage buildings on a 3-acre site. The proposed project would result in a decrease in impervious surface area by adding landscaping on the project site. Additionally, the proposed project would include point source control measures, as identified in Section 1.2.3, Utilities and Infrastructure, of the Project Description.

As noted above, the proposed project would be required to comply with the MRP. In compliance with the MRP, the project applicant would be required to prepare a Stormwater Control Plan (SCP), which would act as the overall program document designed to provide measures to mitigate potential water quality impacts associated with operation of the proposed project. Therefore, the proposed project would continue to minimize pollutant runoff from the project site, and water quality impacts during operation would not be significant.

3.4.5.3 Groundwater

The proposed project would connect to the existing water line within the private alley and would not use groundwater at the site. Although no use of groundwater is proposed for the project, some dewatering may be required during construction. Any dewatering activities would be expected to be temporary in nature. Therefore, the proposed project would not deplete groundwater supplies or interfere substantially with groundwater recharge.

3.4.5.4 Stormwater Collection

The proposed project would not increase the impervious surface area of the project site and therefore would not result in an increase in runoff that would exceed existing stormwater facilities or cause flooding of receiving waters. Additionally, the proposed project would implement site design and source control measures, such as directing stormwater flows to landscaped areas on site, to reduce stormwater runoff.

3.4.5.5 Flooding

The project site is not located within a 100-year flood zone or special flood hazard area as mapped by the Federal Emergency Management Agency (FEMA).[14] Additionally, the project site is also not located in an area subject to tsunami, seiche, or dam failure inundation.[15]

3.5 CRITERION SECTION 15332(E): UTILITIES AND PUBLIC SERVICES

The project site is located in an urban area already served by all necessary municipal utilities (i.e., stormwater, water, wastewater, solid waste) and public services (i.e., police and fire). The following analysis reviews whether the project can, as required by CEQA Guidelines Section 15332(e), be "adequately served by all required utilities and public services." As discussed, the site can be adequately served by all required utilities and public services.

3.5.1 Stormwater

[14] Federal Emergency Management Agency, 2009. Flood Rate Insurance Map. Santa Clara County, California and Incorporated Areas. Panel 208 of 830. May 18.

[15] Cupertino, City of, 2015, op. cit.

The City of Cupertino Public Works Department is responsible for the engineering and maintenance of the stormwater drainage system for the project site and the surrounding area. Stormwater runoff from the project site is channeled into storm drains located along the private alley, which discharge into Calabazas Creek, and ultimately into San Francisco Bay. As noted above, the City participates in the SCVURPP, which implements the NPDES program throughout the county.

Overall stormwater runoff volume from the project site would decrease because the existing site is comprised almost entirely of impervious surfaces. The proposed project would reduce the site coverage by impervious surfaces to 87 percent of the current conditions, and would provide bio-retention areas that would include 16,855 square feet of pervious surfaces for an increase of 8 percent. Additionally, as noted above, the proposed project would include site design and source control measures to reduce stormwater runoff. Therefore, there would be no significant increase in contributions to the municipal stormwater system once the proposed project is in operation.

3.5.2 Water

The project site is served by existing water supply and distribution systems operated and managed by Cal Water. Cupertino is within Cal Water's Los Altos Suburban District (District). The District uses a combination of local groundwater and imported water purchased from the Santa Clara Valley Water District (SCVWD). The project site would be served by the existing water line within the private alley via two new 6-inch connections for water used for fire suppression and 2-inch connections for domestic and irrigation water. It is estimated that the proposed project would result in a slight increase in water usage due to the increase in storage units on the site and new landscaped areas, to a total of 608 gpd, or 0.68 acre feet (AF) per year, an increase of 483 gpd, or 0.54 AF. Cal Water projects that the District's demand for water will increase from 14,156 AF per year to 14,673 AF per year by 2040. The District projects that in 2040 the reasonably available volume of water would be approximately 14,934 AF, a surplus of 261 AF.[16] Therefore, the proposed project would decrease the total available surplus of water supply by approximately 0.2 percent. Therefore, because the proposed project would result in a marginal increase compared to existing water use, and because Cal Water has sufficient supplies through at least 2040, there is sufficient water to serve the proposed project.

3.5.3 Wastewater

Cupertino Sanitary District provides wastewater service to the project site. The Cupertino Sanitary District provides service to over 50,000 people and conveys nearly 5 million gallons of wastewater daily from its customers through 17 pump stations to the San Jose/Santa Clara Water Pollution Control Plant (WPCP). The WPCP treats an average of 110 million gallons of wastewater per day (mgd) and has a capacity of up to 167 mgd.[17]

The project site would be served via a new connection to the existing 8-inch sanitary sewer line located just north of the project site. It is estimated that the proposed project would result in a slight increase in wastewater generation due to the increase in storage units on the site, to a total of

16 California Water Service, 2016. *2015 Urban Water Management Los Altos Suburban District.* June.

17 Cupertino Sanitary District. About Us. Website: www.cupertinosanitarydistrict.org/about_us (accessed January 21, 2019).

547 gpd, an increase of 435 gpd. This increase would not substantially change the Cupertino Sanitary District's wastewater treatment demand projections or require the expansion of wastewater facilities, as it would reduce the WPCP's available capacity of 57 mgd by less than 0.01 percent. Additionally, the WPCP is currently undergoing various operational improvements including headworks enhancements and new and expanded treatment basins.[18] Therefore, there is sufficient wastewater treatment capacity to serve the project.

3.5.4 Solid Waste

Recology South Bay (Recology) provides solid waste collection within the City and transports waste to the Newby Island Sanitary Landfill (Newby Island). As of October 2014, Newby Island had approximately 21 million cubic yards of remaining capacity and a planned closure date of January 2041.[19] The proposed project would produce a minimal amount of solid waste, when compared to the existing solid waste generation on the project site, and would not require the expansion or construction of new solid waste facilities.

3.5.5 Police Services

The Santa Clara County Sheriff's Office, West Valley Division (Sheriff's Office), provides law enforcement services to the City of Cupertino. The proposed project would result in an increase in the daytime population at the project site, but would not result in an increase in residential population within the City. The project site is in an area already served by the Sheriff's Office. It is not anticipated that the proposed project would result in the need for any new physical facilities to maintain acceptable service ratios, response time, or other performance objectives. Therefore, police service is adequate to serve the proposed project.

3.5.6 Fire Protection Services

The Santa Clara County Fire Department (SCCFD) provides fire and emergency services to the City of Cupertino, which includes the project site. The SCCFD handles all fire, rescue, emergency medical and special operations, as well as non-emergency calls for service and assistance. Emergency medical services transportation is provided by Santa Clara County Ambulance, a private ambulance service contracted by the SCCFD. Daily emergency response for the SCCFD consists of 66 employees. The Cupertino Fire Station of the SCCFD is located at 20215 Stevens Creek Boulevard, approximately 1 mile south of the project site. The Cupertino Fire Station is continuously staffed by 8 personnel and includes three fire engines and one fire truck. The project site is in an area already served by the SCCFD, and would not impact the SCCFD's response time standard of responding within 8 minutes. The proposed project would not require development of new or physically altered facilities. Therefore, fire protection service would be adequate to serve the proposed project.

---

18 San Jose, City of, 2013. *The Plant Master Plan.* November.

19 California Department of Resources Recycling and Recovery, 2019. Solid Waste Information System Facility Detail: Newby Island Sanitary Landfill (43-AN-0003). Website: www2.calrecycle.ca.gov/swfacilities/Directory/43-AN-0003 (accessed January 21, 2019).

3.5.7 Schools

The proposed project would include the demolition of the existing self-storage buildings on the project site and the construction of two new self-storage buildings. One residential unit is also included as part of the proposed project; however, it is not expected that the proposed project would result in a substantial increase the school-age population in the area. Therefore, the proposed project would not have an impact on school capacity.

This page intentionally left blank

4.0 EXCEPTONS TO CATEGORICAL EXEMPTIONS

In addition to analyzing the applicability of CEQA Guidelines Section 15332 (Class 32), this technical report assesses whether any of the exceptions to categorical exemptions identified in CEQA Guidelines Section 15300.2 (Exceptions) apply to the proposed project. The following analysis compares the criteria in CEQA Guidelines Section 15300.2 (Exceptions) to the project, and concludes, based on substantial evidence, that none of the exceptions are applicable to the project, and that the project is categorically exempt from CEQA pursuant to CEQA Guidelines Sections 15300 and 15332.

4.1 CRITERION SECTION 15300.2(A): LOCATION

a. Location. Classes 3,4,5,6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

The proposed project does not qualify for an exemption under Classes 3, 4, 5, 6, or 11. The project site is located within an urban developed area and is not located within a sensitive environment. In addition, the proposed project would not result in any impacts on an environmental resource of hazardous or critical concern. Therefore, the exception under CEQA Guidelines Section 15300.2(a) does not apply to the proposed project.

4.2 CRITERION SECTION 15300.2(B): CUMULATIVE IMPACT

b. Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

The effects of the proposed project would generally be beneficial, as the proposed project would provide greater self-storage space within the City and would replace an existing self-storage facility with a more modern facility. The proposed project would result in an increased density of self-storage activities in an urban neighborhood that is already served by utilities and public services, as well as transportation. Any construction effects would be temporary, confined to the project vicinity, and reduced to the extent feasible by implementing specific General Plan policies and applicable regulatory requirements. No successive project of the same type in the same place are known or expected to occur over time that would result in cumulatively considerable impacts. Additionally, as stated in Section 3.4.4.1, the proposed project would be consistent with the applicable CAP, and would not result in cumulative impacts related to GHGs. Therefore, the exception under CEQA Guidelines Section 15300.2(b) does not apply to the proposed project.

4.3 CRITERION SECTION 15300.2(C): SIGNIFICANT EFFECT

c. Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

There are no known unusual circumstances that are applicable to the project and which may result in a significant effect on the environment. The proposed project consists of the demolition of the existing self-storage buildings on the project site and the construction of two new four-story self-storage buildings. The proposed project would not result in a change in the existing use or introduce a new activity to the area that could result in a significant effect on the environment. Therefore, the exception under CEQA Guidelines Section 15003.2(b) does not apply to the proposed project.

4.4 CRITERION SECTION 15300.2(D): SCENIC HIGHWAY

d. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a State Scenic Highway. This criterion does not apply to improvements required as mitigation by an adopted Negative Declaration or certified EIR.

The proposed project would not affect a resource within a State Scenic Highway. The nearest scenic highway, State Route 9, is located approximately 5 miles south of the project site.[20] Therefore, no scenic resources within view of a State Scenic Highway would be altered as part of the project.

4.5 CRITERION SECTION 15300.2(E): HAZARDOUS WASTE SITES

e. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

The project site is not on any list pursuant to Section 65962.5 of the Government Code or any other list compiled for purposes related to identifying the prior release of hazardous materials.[21,22] The project site is currently used as a self-storage site. Therefore, the exception under CEQA Guidelines Section 15300.2(e) does not apply to the project.

4.6 CRITERION SECTION 15300.2(F): HISTORIC RESOURCES

f. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

---

20 California, State of, 2018. *California Scenic Highway Mapping System.* Website: www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm (accessed January 2, 2019).

21 California State Water Resources Control Board, 2019. EnviroStor. Website: www.envirostor.dtsc.ca.gov/public (accessed January 2, 2019).

22 Department of Toxic Substances Control, 2015. GeoTracker. Website: geotracker.waterboards.ca.gov (accessed January 2, 2019).

No historic resources exist in the vicinity of the project site. There is also no known sensitivity for archaeological or paleontological resources on the site. However, the site may contain previously unknown subsurface archaeological deposits. The proposed project would comply with Land Use and Community Design Element Policy 2-72 in the General Plan which would require compliance with City, State, and federal historic preservation laws, regulations, and Codes, including laws related to archaeological resources. In particular, the proposed project would be required to comply with CEQA Guidelines Section 15064.5(e), which specifies procedures to be used in the event of a discovery of Native American human remains on non-federal land. Adherence to CEQA Guidelines Section 15064.5(e) would ensure that impacts to cultural resources would not occur.

4.7 CONCLUSION

On the basis of substantial evidence, as discussed above, the project is eligible for a Class 32 Categorical Exemption in accordance with CEQA Guidelines Section 15332, In-Fill Development Projects. Because the proposed project meets the criteria for categorically exempt in-fill development projects in CEQA Guidelines Section 15332 and none of the exceptions to the categorical exemptions in CEQA Guidelines Section 15300.2 apply, and it would not have a significant effect on the environment, and this analysis finds that a Notice of Exemption may be prepared for the project.

This page intentionally left blank

5.0 STREAMLINING UNDER CEQA GUIDELINES SECTION 15183

5.1 CEQA GUIDELINES SECITON 15183

Section 15183(c) of the CEQA Guidelines specifies that "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards,… then an additional EIR need not be prepared for the project solely on the basis of that impact."

Section 15183(b) of the CEQA Guidelines states that "in approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis: (1) are peculiar to the project or the parcel on which the project would be located; (2) were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent; (3) are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action; or (4) are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR."

Section 15183(d) of the CEQA Guidelines further states that the streamlining provisions of this section "shall apply only to projects that meet the following conditions: (1) the project is consistent with a community plan adopted as part of a general plan, a zoning action which zoned or designated the parcel on which the project would be located to accommodate a particular density of development, or a general plan of a local agency; and (2) an EIR was certified by the lead agency for the zoning action, the community plan, or the general plan."

5.2 APPLICABILITY OF SECTION 15183 TO THE PROPOSED PROJECT

As stated in Sections 3.1.1 and 3.1.2 above, the proposed project would be consistent with the General Plan designations and zoning for the site described in the General Plan and would meet the requirements for streamlining under CEQA Guidelines Section 15183(d).

As stated in Sections 3.0 and 4.0 above, potential impacts as a result of the proposed project would be substantially mitigated by the imposition of uniformly applied standard conditions of approval.

As stated previously, the General Plan Amendment, Housing Element Update, and Associated Rezoning Final Environmental Impact Report (SCH No. 2014032007), was certified by the City Council on December 4, 2014. The General Plan EIR was prepared consistent with the requirements for applicability of streamlining under CEQA Guidelines Section 15183(d)(2), described above. There are no environmental effects that are peculiar to the proposed project or project site that were not analyzed in the General Plan EIR. Therefore, the proposed project is eligible for streamlined environmental review under California Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183.

This page intentionally left blank

APPENDIX A

TRIP GENERATION ANALYSIS

This page intentionally left blank

LSA

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: January 25, 2019

TO: Erick Serrano, Associate Planner, City of Cupertino

FROM: Ken Wilhelm, Principal
Matthew Wiswell, Planner/Project Manager

SUBJECT: Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California

LSA has prepared this analysis of trip generation for the proposed Public Storage (self-storage/mini-warehouse) Facility Project (project) in the City of Cupertino. The project site is located at 20565 Valley Green Drive. The proposed project would demolish the existing 54,186-square-foot (sf) single-story storage facility and construct an approximately 263,671-gross-square-foot storage facility within two four-story buildings with below-grade basements. The proposed site plan is provided as an attachment.

The existing Public Storage facility includes nine one-story drive-up buildings totaling 54,186 sf of self-storage use and is bounded by Interstate 280 to the north, office use to the south, and residential uses to the east and west. Access to the site is provided through a driveway at the northeast corner of the site that connects to a shared driveway that ends at Valley Green Drive.

The purpose of this analysis is to determine the trip generation of the proposed project and whether the project would require a more-detailed traffic analysis according to the City of Cupertino's (City) General Plan Circulation Element. According to the General Plan and consistent with the Santa Clara Valley Transportation Authority (VTA) Traffic Impact Analysis (TIA) guidelines, a traffic impact analysis would be needed for all developments projected to generate more than 100 trips during either AM or PM peak-hours. As such, this memorandum evaluates the trip generation for the proposed project.

Trip Generation

The trip generation potential of the proposed project was calculated using trip generation rates found in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition (2017). Table A presents the trip generation estimate for the proposed project. As Table A shows, the proposed 263,671 sf self-storage project is estimated to generate 398 daily trips, 27 of which would occur in the AM peak hour and 45 of which would occur in the PM peak hour.

Table A also presents a comparison of the trip generation potential of the existing buildings using the same ITE methodology. As shown in Table A, the existing 54,186 sf facility is estimated to generate 82 daily trips, 5 of which would occur in the AM peak hour and 9 of which would occur in

the PM peak hour. The trip generation potential of the proposed project is higher than for the existing buildings, and the net increase is 316 daily trips, of which 22 net new trips would occur in the AM peak hour and 36 net new trips would occur in the PM peak hour.

Table A: Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Mini-Warehouse (Self-Storage)[2]		TSF	1.51	0.06	0.04	0.10	0.08	0.09	0.17
Existing Trip Generation									
Self-Storage	54.186	TSF	82	3	2	5	4	5	9
Project Trip Generation									
Self-Storage	263.671	TSF	398	16	11	27	21	24	45
Net Trip Generation			**316**	**13**	**9**	**22**	**17**	**19**	**36**

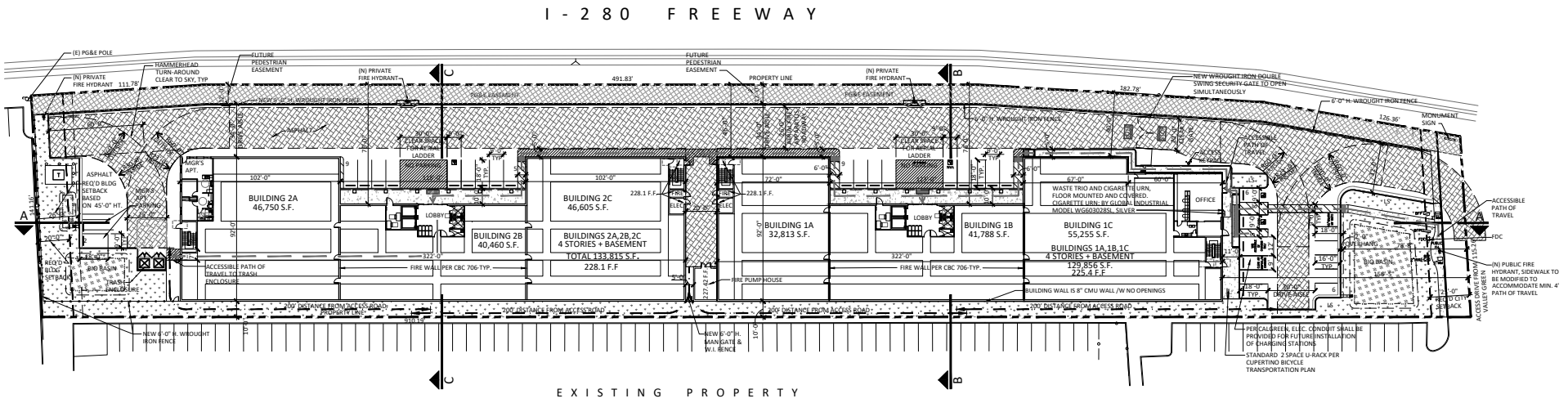
[1] Trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 10th Edition (2017).
[2] Land Use Code (151) - Mini Warehouse
ADT = average daily traffic
TSF = thousand square feet

Conclusion

LSA analyzed trip generation for the proposed project to determine whether it would require a more detailed traffic analysis according to the City's General Plan Circulation Element. Using ITE trip rates, the proposed project is anticipated to result in a net increase of less than 100 trips in the AM and PM peak hours, which is below the threshold for requiring a detailed TIA. Thus, the proposed project does not meet the criteria for requiring a TIA.

If you have any questions, please contact me at (949) 553-0666.

Attachment: Proposed Site Plan



LSA

0 30 60
FEET

N

Cupertino Public Storage Project
Proposed Site Plan

SOURCE: KSP STUDIO, NOVEMBER 2018.

Q:\COC1803 Cupertino Public Storage\PRODUCTS\g\figures\Proposed Site Plan.ai (1/24/19)

This page intentionally left blank

APPENDIX B

AIR QUALITY AND GREENHOUSE GAS EMISSIONS ANALYSIS

This page intentionally left blank

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: January 29, 2019

TO: Erick Serrano, Associate Planner, City of Cupertino

FROM: Amy Fischer, Principal
Matthew Wiswell, Planner/Project Manager

SUBJECT: Air Quality and Greenhouse Gas Analysis – Cupertino Public Storage Project

INTRODUCTION

This Air Quality and Greenhouse Gas Analysis Memorandum for the proposed Cupertino Public Storage Project (project) in the City of Cupertino (City) has been prepared using methods and assumptions recommended in the Bay Area Air Quality Management District's (BAAQMD) *California Environmental Quality Act (CEQA) Guidelines*.[1] This analysis includes an assessment of criteria pollutant emissions, an assessment of carbon monoxide (CO) hot-spot impacts, and an assessment of the project's greenhouse gas (GHG) emissions.

PROJECT DESCRIPTION

The approximately 3-acre (130,462-square-foot) project site is located at 20565 Valley Green Drive in the City of Cupertino in Santa Clara County (Assessor's Parcel Number [APN] 326-10-044). The site is bounded by Interstate 280 (I-280) to the north, residential uses to the east, office uses and associated parking lots to the south, and residential uses to the west.

The project site is developed with nine single-story buildings totaling 54,186 square feet, all of which would be demolished as part of the project. The proposed project would include the construction of two new four-story self-storage buildings, each with a below-grade basement. Building 1 would be approximately 129,856 square feet, and would include an office space in the northeast corner of the building. Building 2 would be approximately 133,815 square feet, and would include a manager's apartment in the northwest corner of the building.

Both of the proposed buildings would include a lobby in the center of the building with elevators and stairwells, as well as additional stairwells on the east and west sides of the buildings. A total of 32 automobile parking spaces and two bicycle parking spaces would be provided throughout the project site.

[1] Bay Area Air Quality Management District, 2017. *CEQA Guidelines*. May.

To prepare the project site for construction, all nine of the existing buildings would be demolished and 17 trees would be removed. The project site would be excavated down to a depth of approximately 12 feet for the basements of both of the proposed buildings. Additionally, trenching for utility installation would occur. A total of 24,250 cubic yards of soil would be excavated from the project site, 1,250 cubic yards of which would be retained on site and 23,000 cubic yards of which would be off-hauled. Project construction would occur over a 13-month period commencing in April 2020.

ENVIRONMENTAL SETTING

Air Quality Background

Both State and federal governments have established health-based Ambient Air Quality Standards (AAQS) for six criteria air pollutants:[2] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the project area are O_3, CO, and PM. Significance thresholds established by an air district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the Air Basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_x) and reactive organic gases (ROG).

Occupants of facilities such as schools, day care centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with

[2] Criteria pollutants are defined as those pollutants for which the Federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Greenhouse Gas and Global Climate Change Background

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities that lead to an increase in the greenhouse effect.[3]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, CH_4, and N_2O, some gases, like HFCs, PFCs, and SF_6, are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water

[3] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above only.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

REGULATORY FRAMEWORK

Air quality standards and the regulatory framework are discussed below.

United States Environmental Protection Agency

At the federal level, the United States Environmental Protection Agency (USEPA) has been charged with implementing national air quality programs. USEPA air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required USEPA to establish primary and secondary National Ambient Air Quality Standards (NAAQS) and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. USEPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The USEPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the USEPA on suspected hazardous pollutants prior to regulatory development.

California Air Resources Board

CARB is the agency responsible for the coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), adopted in 1988. The CCAA requires that all air districts in the State achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CCAA specifies that districts should focus on reducing the emissions from transportation and air-wide emission sources, and provides districts with the authority to regulate indirect sources.

CARB is also primarily responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. CARB is primarily responsible for Statewide pollution sources and produces a major part of the SIP. Local air districts provide additional strategies for sources under their jurisdiction. CARB combines this data and submits the completed SIP to USEPA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for mobile sources, consumer products, small utility engines, and off-road vehicles. CARB's Diesel Risk Reduction Plan[4] is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel – a step already implemented – and cleaner-burning diesel engines.

Because of the robust evidence relating proximity to roadways and a range of non-cancer and cancer health effects, the CARB also created guidance for avoiding air quality conflicts in land use planning in its Air Quality and Land Use Handbook: A Community Health Perspective.[5] In its guidance, CARB advises that new sensitive uses (e.g., residences, schools, day care centers, playgrounds, and hospitals) not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day, or within 1,000 feet of a distribution center (warehouse) that accommodates more than 100 trucks or more than 90 refrigerator trucks per day.

---

4 California Air Resources Board. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Prepared by the Stationary Source Division and Mobile Source Control Division. Available online at: www.arb.ca.gov/diesel/documents/rrpFinal.pdf (accessed January 2019). October.

5 California Environmental Protection Agency and California Air Resources Board. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available online at: www.arb.ca.gov/ch/handbook.pdf (accessed January 2019). April.

CARB guidance suggests that the use of these guidelines be customized for individual land use decisions, and take into account the context of development projects. The Air Quality and Land Use Handbook specifically states that these recommendations are advisory and acknowledges that land use agencies must balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

Bay Area Air Quality Management District

The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

BAAQMD Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds.[6] This regulation limits the "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." The BAAQMD must receive odor complaints from ten or more complainants within a 90-day period in order for the limitations of this regulation to go into effect. If this criterion has been met, an odor violation can be issued by the BAAQMD if a test panel of people can detect an odor in samples collected periodically from the source.

Clean Air Plan

The Clean Air Plan[7] guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD 2017 Clean Air Plan, which was adopted on April 19, 2017, by the BAAQMD Board of Directors, is the current Clean Air Plan which contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_x), particulate matter and GHG emissions.

The Bay Area 2017 Clean Air Plan:

- Describes the BAAQMD's plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities;

- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050;

---

6 Bay Area Air Quality Management District. 1982. *Rules and Regulations, Regulation 7: Odorous Substances.* March.

7 Bay Area Air Quality Management District. 2017. *Final 2017 Clean Air Plan*. Available online at: www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en (accessed January 2019). April 19.

- Provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve GHG reduction targets; and

- Includes a wide range of control measures designed to decrease emissions 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.

BAAQMD CEQA Air Quality Guidelines

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. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

In June 2010, the BAAQMD adopted updated draft CEQA Air Quality Guidelines and these were finalized in May 2011. These guidelines superseded agency air quality guidelines previously adopted in 1999 and were intended to advise lead agencies on how to evaluate potential air quality impacts.

In May 2017, the BAAQMD published an updated version of the CEQA Guidelines. The 2017 CEQA Guidelines include thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on air quality. These protective thresholds are appropriate in the context of the size, scale, and location of the project.

City of Cupertino

General Plan

The Environmental Resources and Sustainability Element of the City's General Plan[8] seeks to ensure a sustainable future for the City of Cupertino, promote conservation of energy resources, improve building efficiency and energy conservation, and maintain healthy air quality levels. Applicable Environmental Resources and Sustainability Element policies include the following:

- 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.

- 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.

---

[8] Cupertino, City of, 2015. *Cupertino General Plan 2015-2040*. October 20.

- 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.

    - 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.

Climate Action Plan

The City of Cupertino Climate Action Plan (CAP) was adopted in January 2015.[9] The CAP was developed to identify sources of GHG emissions within the City; present current and future emissions estimates; identify a GHG reduction target for future years; and present 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 are consistent with the BAAQMD's CEQA Guidelines for a Qualified Greenhouse Gas Emissions Reduction Program.

METHODOLOGY

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short term impacts can contribute to exceedances of air quality standards. Construction activities include site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips. The California Emission Estimator Model v.2016.3.2 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site.

Operational Emissions

The air quality analysis includes estimating emissions associated with long-term operation of the project. Indirect emissions of criteria pollutants with regional impacts would be emitted by project-generated vehicle trips. In addition, localized air quality impacts (i.e., higher carbon monoxide

[9] Cupertino, City of, 2015. *City of Cupertino Climate Action Plan*. January.

concentrations or “hot spots”) near intersections or roadway segments in the project vicinity would also potentially occur due to project generated vehicle trips.

Consistent with the BAAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project.

Greenhouse Gas Emissions

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term GHG emissions associated with project-related vehicular trips. The City of Cupertino’s CAP meets the BAAQMD requirements for a Qualified Greenhouse Gas Reduction Strategy; therefore, the proposed project was evaluated for consistency with the relevant CAP reduction measures.

THRESHOLDS OF SIGNIFICANCE

The State CEQA Guidelines indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The BAAQMD has further defined these criteria of significance to indicate the project would result in a significant air quality impact if it would:

- Violate the Bay Area Air Quality Management District’s air quality standards or contribute substantially to an existing or projected air quality violation by:
    - Generating average daily criteria air pollutant emissions of ROG, NO_x or $PM_{2.5}$ exhaust emissions in excess of 54 pounds per day or PM_{10} exhaust emissions of 82 pounds per day during project construction;
    - For project operations, generating average daily criteria air pollutant emissions of ROG, NO_x, or $PM_{2.5}$ in excess of 54 pounds per day, or maximum annual emissions of 10 tons per year. For emissions of PM_{10}, generating average daily emissions of 82 pounds per day or 15 tons per year; or
    - Contributing to CO concentrations exceeding the State ambient air quality standards of 9 ppm averaged over 8 hours and 20 ppm for 1-hour for project operations.

- Expose sensitive receptors (including residential areas) or the general public to toxic air contaminants in excess of the following thresholds:
    - An excess cancer risk level of more than 10 in one million, or non-cancer (i.e., chronic or acute) risk greater than 1.0 hazard index from a single source;
    - An incremental increase of greater than 0.3 µg/m^3 annual average $PM_{2.5}$ from a single source;
    - An excess cancer risk level of more than 100 in one million, or non-cancer risk greater than 100 in one million from all sources; or
    - An incremental increase of greater than 0.8 µg/m^3 annual average $PM_{2.5}$ from all sources.

It should be noted that the emission thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

The State CEQA Guidelines indicate that a project would normally have a significant adverse green-house gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Section 15064.4 of the CEQA Guidelines states that: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify greenhouse gas emissions, or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the 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.

According to the BAAQMD CEQA Guidelines, if a project is consistent with an adopted qualified Greenhouse Gas Reduction Strategy that meets the standards, it can be presumed that the project will not have significant greenhouse gas emission impacts. This approach is consistent with the State CEQA Guidelines, Section 15183.5, and will be used in this analysis.

The City of Cupertino's CAP meets the BAAQMD requirements for a Qualified Greenhouse Gas Reduction Strategy. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed project would be consistent with the City's CAP.

IMPACTS AND MITIGATION MEASURES

The proposed project would release emissions over the short term as a result of construction activities, and over the long term from traffic generation and operation of the project. Emissions would include criteria air pollutants and GHG emissions. The sections below describe the proposed project's consistency with applicable air quality plans, estimated project emissions, and the significance of impacts with respect to BAAQMD thresholds.

Air Quality Impacts

The following sections describe the proposed project's construction- and operation-related air quality impacts and CO impacts.

Consistency with Applicable Air Quality Plans

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (Clean Air Plan),[10] which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest heath risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce GHG emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Clean Air Plan Goals. The primary goals of the Bay Area Clean Air Plan are to: attain air quality standards; reduce population exposure and protect public health in the Bay Area; and reduce GHG emissions and protect climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed below, implementation of the proposed project would result in less-than-significant construction- and operation-period emissions. Therefore, the project would not conflict with the Clean Air Plan goals.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-GHG Pollutants Measures.

[10] Bay Area Air Quality Management District, 2017. Clean Air Plan. April 19.

Stationary Source Control Measures. The stationary source measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD's Permit and Inspection programs. Since the project would not include any stationary sources, the Stationary Source Measures of the Clean Air Plan are not applicable to the project.

Transportation Control Measures. The BAAQMD identifies Transportation Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, TACs, and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The project site is located in close proximity to a mix of existing uses, including residential, commercial, and office uses and would be readily accessible to pedestrians, bicyclists, and transit users. Regional access to the project site is provided via I-280. In addition, public access to the projects site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately a ½-mile from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations. In addition, the proposed project would provide bicycling parking spaces, which would promote the BAAQMD's initiatives to reduce vehicle trips and vehicle miles traveled and would increase the use of alternate means of transportation. Therefore, the project would not hinder the BAAQMD's initiatives to reduce vehicle trips and vehicle miles traveled.

Energy Control Measures. The Clean Air Plan also includes Energy Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the Clean Air Plan are not applicable to the project.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. The proposed project would be required to comply with the latest Cal Green Building Code standards. Therefore, the proposed project would not conflict with these measures.

Agriculture Control Measures. The Agriculture Control Measures are designed to primarily reduce emissions of methane. Since the Project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the project.

Natural and Working Lands Control Measures. The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to adopt ordinances that promote urban-tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the project.

Waste Management Control Measures. The Waste Management Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the project.

Super GHG Control Measures. The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the project.

Clean Air Plan Implementation. As discussed above, implementation of the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the project would not disrupt or hinder implementation of a control measure from the Clean Air Plan.

Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include demolition, grading, paving, and building activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, volatile organic compounds (VOCs) and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod, consistent with BAAQMD recommendations. Project construction would commence in April 2020 and would extend for approximately 13 months. Construction of the proposed project would include the demolition of on-site buildings totaling 54,186 square feet and would require the off-haul of approximately 23,000 cubic yards of soil, which were included as inputs to CalEEMod. Other construction details are not yet known; therefore, default assumptions (e.g., construction fleet activities) from CalEEMod were used. Construction-related emissions are presented in Table 1. CalEEMod output sheets are included in Attachment A.

Table 1: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	8.9	18.7	0.8	1.2	0.7	0.4
BAAQMD Thresholds	**54.0**	**54.0**	**54.0**	**BMP**	**82.0**	**BMP**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., January 2019.
BMP = best management practices

As shown in Table 1, construction emissions associated with the project would not exceed the BAAQMD's thresholds for ROG, NO_x, exhaust $PM_{2.5}$, and exhaust PM_{10} emissions. The BAAQMD requires the implementation of the BAAQMD's Basic Construction Mitigation Measures to reduce construction fugitive dust impacts to a less-than-significant level as follows:

- 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 tracked-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.

- A publicly visible sign shall be posted with the telephone number and person to contact at the City of Cupertino 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.

Long-Term Operational Emissions

Long-term air pollutant emission impacts are those associated with area sources and mobile sources related to the proposed project. In addition to the short-term construction emissions, the project would also generate long-term air pollutant emissions, such as those associated with changes in permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as landscape equipment would also result in pollutant emissions.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. Area source emissions associated with the project would include emissions from the use of landscaping equipment.

Emission estimates for operation of the project were calculated using CalEEMod. Model results are shown in Table 2. Trip generation rates for the project were based on the project's trip generation estimates, as identified in the Trip Generation Memorandum.[11] Based on the Trip Generation

[11] LSA Associates, Inc., 2019. *Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California*. January 25.

Memorandum, the proposed project would generate approximately 316 net new average daily trips, with approximately 22 trips occurring in the AM peak hour and approximately 36 trips occurring in the PM peak hour.

The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project; emissions are released in other areas of the Air Basin. The daily emissions associated with project operational trip generation, energy, and area sources are identified in Table 2 for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The results shown in Table 2 indicate the project would not exceed the significance criteria for daily ROG, NO_2, PM_{10} or $PM_{2.5}$ emissions; therefore, the proposed project would not have a significant effect on regional air quality and mitigation would not be required.

Table 2: Project Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Pounds Per Day				
Area Source Emissions	6.4	0.0	0.0	0.0
Energy Source Emissions	0.2	1.9	0.1	0.1
Mobile Source Emissions	0.6	2.6	2.0	0.5
Total Emissions	**7.2**	**4.5**	**2.1**	**0.7**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	**No**	**No**	**No**	**No**
Tons Per Year				
Area Source Emissions	1.2	0.0	0.0	0.0
Energy Source Emissions	0.0	0.3	0.0	0.0
Mobile Source Emissions	0.1	0.5	0.3	0.1
Total Emissions	**1.3**	**0.8**	**0.4**	**0.1**
BAAQMD Thresholds	10.0	10.0	15.0	10.0
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., January 2019.

Localized CO Impacts

The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans;

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and

- The project 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, or below-grade roadway).

The proposed project would not conflict with standards established by the Santa Clara Valley Transportation Authority for designated roads and highways, a regional transportation plan, or other agency plans. The project site is not located in an area where vertical or horizontal mixing of air is substantially limited. As identified in the Trip Generation Memorandum, the proposed project would generate approximately 316 net new average daily trips, with approximately 22 trips occurring in the AM peak hour and approximately 36 trips occurring in the PM peak hour. Therefore, the project's contribution to peak hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. Therefore, the proposed project would not result in localized CO concentrations that exceed State or federal standards.

Cumulative Impacts

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. Therefore, if annual emissions of construction- or operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a cumulatively significant impact. As discussed above, no exceedance of BAAQMD emission thresholds would occur as a result of construction or operation of the proposed project. The proposed project's construction and operational emissions of criteria pollutants are estimated to be well below the emissions threshold established for the region. Therefore, the project would not result in a cumulatively considerable contribution to regional air quality impacts.

Sensitive Receptors

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). A significant cumulative impact would occur if the project in combination with other projects located within a 1,000-foot radius of the project site would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient $PM_{2.5}$ increase greater than 0.8 $\mu g/m^3$ on an annual average basis. This section describes the potential impact on sensitive receptors from construction of the proposed project.

The project site is located in an urban area in close proximity to existing residential uses that could be exposed to diesel emission exhaust during the construction period. The property lines of residential uses are located immediately adjacent to the project site; however the area adjacent to the project site includes a parking lot and carports. The nearest residential buildings are located approximately 125 feet west of the project site. To estimate the potential cancer risk from project construction equipment exhaust (including diesel particulate matter), a dispersion model was used

to translate an emission rate from the source location to a concentration at the receptor location (i.e., a nearby residential land use). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using CARB's exposure methodology, with the air dispersion modeling performed using the USEPA dispersion model AERMOD. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and site-specific meteorological data. Table 3 identifies the results of the analysis utilizing the CalEEMod default of Tier 0 construction equipment. Model snap shots of the sources are shown in Attachment B.

Table 3: Inhalation Health Risks from Project Construction to Off-Site Receptors

Source	Carcinogenic Inhalation Health Risk (in a million)	Annual $PM_{2.5}$ Concentration (ug/m^3)	Chronic Inhalation Hazard Index
Maximum Exposed Individual Location	9.94	0.06	0.01
Threshold	**10.00**	**0.30**	**1.00**

Source: LSA Associates, Inc., 2019.

As shown in Table 3, the risk would be 9.94 in one million, which would not exceed the BAAQMD cancer risk of 10 in one million. The highest chronic hazard index would be 0.01, which would not exceed the threshold of 1.0. The results of the analysis indicate that the maximum $PM_{2.5}$ concentration would be 0.06 µg/m^3, which would not exceed the BAAQMD significance threshold of 0.30 µg/m^3. Once the project is constructed, the project would not be a source of substantial emissions. Therefore, construction and operation of the project would not exceed BAAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

Objectionable Odors

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people.

Greenhouse Gas Analysis

This section discusses the project's impacts related to the release of GHG emissions for both construction and operational phases of the project.

Construction Emissions

Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed project would generate approximately 652.8 metric tons of CO_2e. Implementation of the BAAQMD's Basic Construction Mitigation Measures would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment.

Operational Emissions

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources as well as indirect emissions from sources associated with energy consumption. Mobile-source GHG emissions would include project-generated vehicle trips associated with trips to the proposed project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources.

As discussed above, the City of Cupertino CAP was developed to identify sources of GHG emissions within the City; present current and future emissions estimates; identify a GHG reduction target for future years; and present 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 are consistent with the BAAQMD's CEQA Guidelines for a Qualified Greenhouse Gas Emissions Reduction Program. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed project would be consistent with the City's CAP. The proposed project's consistency with the relevant CAP reduction measures is provided in Table 4.

In addition, the proposed project is generally consistent with the GHG inventory contained in the CAP. Both the existing and projected GHG inventory contained in the City's CAP were derived based on the land use designations and associated densities defined in the City's General Plan and Housing Element. The City of Cupertino General Plan Land Use Map designates the project site as Industrial/Residential which allows industrial uses and residential uses or a compatible combination of the two. Therefore, since the project is consistent with the City's General Plan and proposed development is within the development capacity assumed in the Housing Element, it is also consistent with the GHG inventory contained in the CAP.

As shown in Table 4, the proposed project would be consistent with the applicable CAP reduction measures and the proposed project's GHG emissions would not be considered a significant impact.

Table 4: Consistency with Climate Action Plan Measures

Policy	Compliance	Discussion
Transportation and Land Use Strategy		
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.	Complies.	The project site is located in northern Cupertino and would be readily accessible to pedestrians, bicyclists, and transit users. In addition, the proposed project would provide bicycle parking.
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.	Complies.	The project site is located in northern Cupertino and would be readily accessible to pedestrians, bicyclists, and transit users. Regional access to the project site is provided via I-280. In addition, public access to the projects site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately a ½-mile from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations.
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.	Complies.	Public access to the projects site is provided by a local municipal bus line (Santa Clara Valley Transit Authority Lines 53, 54, 55, and 81) with bus stops approximately a ½-mile from the project site. These bus lines provide access to and from the Sunnyvale Transit Center, San Jose State University, and West Valley and De Anza Colleges, among other destinations.
Water Strategy Measures		
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.	Complies.	The proposed project would be required to comply with the City of Cupertino's Urban Water Management Plan.
Solid Waste Strategy Measures		
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.	Complies.	The proposed project would be required to comply with the City's Construction & Demolition Debris Diversion and Green Building Ordinances.
Green Infrastructure Strategy Measures		
Measure C-G-1: Urban Forest Program. Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.	Complies.	The proposed project would include a total of 16,545 square feet of landscaping on the project site. The majority of the landscaping would be around the perimeter of the project site and would consist of trees, shrubs, and groundcover. Approximately 54 trees would be planted as a part of the proposed project, for a net total of 64 trees on the site. A total of 2,690-square-feet of bio-retention basins would be provided on site in the southeast and southwest corners of the project site.

Source: LSA Associates, Inc., 2019.

CONCLUSION

Based on the analysis presented above, with implementation of the BAAQMD's Basic Construction Mitigation Measures, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed BAAQMD thresholds of significance. In addition, operational emissions associated with the proposed project would not exceed BAAQMD established significance thresholds for ROG, NO_x, PM_{10}, or $PM_{2.5}$ emissions. The proposed project would not result in a cumulatively considerable contribution to regional air quality impacts. In addition, the proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The proposed project would also not result in objectionable odors affecting a substantial number of people. The proposed project would be consistent with the applicable reduction measures included in the City's CAP, and therefore, the proposed project's GHG emissions would not be considered a significant impact.

Attachment A: CalEEMod Output Sheets

Attachment B: HRA Model Snapshots

ATTACHMENT A

CALEEMOD OUTPUT SHEETS

Cupertino Public Storage Project

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	263.67	1000sqft	2.70	263,671.00	0
Parking Lot	32.00	Space	0.30	12,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on a 5-year average (2016-2020), PG&E, 2015

Land Use - Building 1 would be approximately 129,856 square feet and Building 2 would be approximately 133,815 square feet. total of 32 automobile parking spaces would be provided throughout the 3-acre project site.

Construction Phase - Approximately 13-month construction period

Demolition - Nine on-site existing buildings totaling 54,186 square feet would be demolished

Grading - Approximately 23,000 cubic yards of soil off-haul

Vehicle Trips - Trip generation based on Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California

Mobile Land Use Mitigation -

Cupertino Public Storage Project - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	23,000.00
tblLandUse	LandUseSquareFeet	263,670.00	263,671.00
tblLandUse	LotAcreage	6.05	2.70
tblLandUse	LotAcreage	0.29	0.30
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblVehicleTrips	ST_TR	1.32	1.20
tblVehicleTrips	SU_TR	0.68	1.20
tblVehicleTrips	WD_TR	6.97	1.20

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	0.2813	2.9655	2.1278	5.7500e-003	0.2028	0.1199	0.3227	0.0641	0.1125	0.1766	0.0000	522.4902	522.4902	0.0732	0.0000	524.3196
2021	1.4512	0.6777	0.6348	1.4400e-003	0.0350	0.0302	0.0652	9.5000e-003	0.0284	0.0379	0.0000	128.0011	128.0011	0.0201	0.0000	128.5040
Maximum	**1.4512**	**2.9655**	**2.1278**	**5.7500e-003**	**0.2028**	**0.1199**	**0.3227**	**0.0641**	**0.1125**	**0.1766**	**0.0000**	**522.4902**	**522.4902**	**0.0732**	**0.0000**	**524.3196**

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	0.2813	2.9654	2.1278	5.7500e-003	0.2028	0.1199	0.3227	0.0641	0.1125	0.1766	0.0000	522.4899	522.4899	0.0732	0.0000	524.3193
2021	1.4512	0.6777	0.6348	1.4400e-003	0.0350	0.0302	0.0652	9.5000e-003	0.0284	0.0379	0.0000	128.0010	128.0010	0.0201	0.0000	128.5039
Maximum	**1.4512**	**2.9654**	**2.1278**	**5.7500e-003**	**0.2028**	**0.1199**	**0.3227**	**0.0641**	**0.1125**	**0.1766**	**0.0000**	**522.4899**	**522.4899**	**0.0732**	**0.0000**	**524.3193**

	ROG	NOx	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	4-6-2020	7-5-2020	1.4488	1.4488
2	7-6-2020	10-5-2020	0.8957	0.8957
3	10-6-2020	1-5-2021	0.8957	0.8957
4	1-6-2021	4-5-2021	1.0955	1.0955
5	4-6-2021	7-5-2021	0.9906	0.9906
		Highest	1.4488	1.4488

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	1.1686	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.6300e-003
Energy	0.0375	0.3410	0.2864	2.0500e-003		0.0259	0.0259		0.0259	0.0259	0.0000	696.6656	696.6656	0.0358	0.0127	701.3590
Mobile	0.0923	0.4666	1.1338	4.0200e-003	0.3432	3.7200e-003	0.3470	0.0921	3.4800e-003	0.0956	0.0000	369.0571	369.0571	0.0134	0.0000	369.3912
Waste						0.0000	0.0000		0.0000	0.0000	66.3679	0.0000	66.3679	3.9222	0.0000	164.4237
Water						0.0000	0.0000		0.0000	0.0000	19.3441	49.2059	68.5501	1.9912	0.0478	132.5770
Total	**1.2984**	**0.8076**	**1.4230**	**6.0700e-003**	**0.3432**	**0.0296**	**0.3729**	**0.0921**	**0.0294**	**0.1215**	**85.7120**	**1,114.9338**	**1,200.6459**	**5.9626**	**0.0606**	**1,367.7565**

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	1.1686	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.6300e-003
Energy	0.0375	0.3410	0.2864	2.0500e-003		0.0259	0.0259		0.0259	0.0259	0.0000	696.6656	696.6656	0.0358	0.0127	701.3590
Mobile	0.0923	0.4666	1.1338	4.0200e-003	0.3432	3.7200e-003	0.3470	0.0921	3.4800e-003	0.0956	0.0000	369.0571	369.0571	0.0134	0.0000	369.3912
Waste						0.0000	0.0000		0.0000	0.0000	66.3679	0.0000	66.3679	3.9222	0.0000	164.4237
Water						0.0000	0.0000		0.0000	0.0000	19.3441	49.2059	68.5501	1.9912	0.0478	132.5770
Total	**1.2984**	**0.8076**	**1.4230**	**6.0700e-003**	**0.3432**	**0.0296**	**0.3729**	**0.0921**	**0.0294**	**0.1215**	**85.7120**	**1,114.9338**	**1,200.6459**	**5.9626**	**0.0606**	**1,367.7565**

	ROG	NOx	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**

3.0 Construction Detail

Construction Phase

Cupertino Public Storage Project - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/6/2020	5/1/2020	5	20	
2	Site Preparation	Site Preparation	5/2/2020	5/6/2020	5	3	
3	Grading	Grading	5/7/2020	5/14/2020	5	6	
4	Building Construction	Building Construction	5/15/2020	3/18/2021	5	220	
5	Paving	Paving	3/19/2021	4/1/2021	5	10	
6	Architectural Coating	Architectural Coating	4/2/2021	4/15/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 395,507; Non-Residential Outdoor: 131,836; Striped Parking Area: 768 (Architectural Coating – sqft)

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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	246.00	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	6	15.00	0.00	2,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	116.00	45.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	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					0.0267	0.0000	0.0267	4.0400e-003	0.0000	4.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**	**0.0267**	**0.0166**	**0.0433**	**4.0400e-003**	**0.0154**	**0.0195**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2386**

3.2 Demolition - 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	1.0300e-003	0.0360	7.2300e-003	1.0000e-004	2.0800e-003	1.2000e-004	2.1900e-003	5.7000e-004	1.1000e-004	6.8000e-004	0.0000	9.4264	9.4264	4.9000e-004	0.0000	9.4385
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	5.0000e-004	3.6000e-004	3.6800e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0384	1.0384	3.0000e-005	0.0000	1.0391
Total	**1.5300e-003**	**0.0363**	**0.0109**	**1.1000e-004**	**3.2700e-003**	**1.3000e-004**	**3.3800e-003**	**8.9000e-004**	**1.2000e-004**	**1.0000e-003**	**0.0000**	**10.4648**	**10.4648**	**5.2000e-004**	**0.0000**	**10.4776**

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					0.0267	0.0000	0.0267	4.0400e-003	0.0000	4.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**	**0.0267**	**0.0166**	**0.0433**	**4.0400e-003**	**0.0154**	**0.0195**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2385**

3.2 Demolition - 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	1.0300e-003	0.0360	7.2300e-003	1.0000e-004	2.0800e-003	1.2000e-004	2.1900e-003	5.7000e-004	1.1000e-004	6.8000e-004	0.0000	9.4264	9.4264	4.9000e-004	0.0000	9.4385
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	5.0000e-004	3.6000e-004	3.6800e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0384	1.0384	3.0000e-005	0.0000	1.0391
Total	**1.5300e-003**	**0.0363**	**0.0109**	**1.1000e-004**	**3.2700e-003**	**1.3000e-004**	**3.3800e-003**	**8.9000e-004**	**1.2000e-004**	**1.0000e-003**	**0.0000**	**10.4648**	**10.4648**	**5.2000e-004**	**0.0000**	**10.4776**

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					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1100e-003	0.0636	0.0323	6.0000e-005		3.3000e-003	3.3000e-003		3.0300e-003	3.0300e-003	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0552
Total	**6.1100e-003**	**0.0636**	**0.0323**	**6.0000e-005**	**0.0271**	**3.3000e-003**	**0.0304**	**0.0149**	**3.0300e-003**	**0.0179**	**0.0000**	**5.0146**	**5.0146**	**1.6200e-003**	**0.0000**	**5.0552**

3.3 Site Preparation - 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	9.0000e-005	6.0000e-005	6.6000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1869	0.1869	0.0000	0.0000	0.1870
Total	**9.0000e-005**	**6.0000e-005**	**6.6000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1869**	**0.1869**	**0.0000**	**0.0000**	**0.1870**

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					0.0271	0.0000	0.0271	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1100e-003	0.0636	0.0323	6.0000e-005		3.3000e-003	3.3000e-003		3.0300e-003	3.0300e-003	0.0000	5.0146	5.0146	1.6200e-003	0.0000	5.0551
Total	**6.1100e-003**	**0.0636**	**0.0323**	**6.0000e-005**	**0.0271**	**3.3000e-003**	**0.0304**	**0.0149**	**3.0300e-003**	**0.0179**	**0.0000**	**5.0146**	**5.0146**	**1.6200e-003**	**0.0000**	**5.0551**

3.3 Site Preparation - 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	9.0000e-005	6.0000e-005	6.6000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1869	0.1869	0.0000	0.0000	0.1870
Total	**9.0000e-005**	**6.0000e-005**	**6.6000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1869**	**0.1869**	**0.0000**	**0.0000**	**0.1870**

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					0.0210	0.0000	0.0210	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2900e-003	0.0792	0.0482	9.0000e-005		3.8200e-003	3.8200e-003		3.5100e-003	3.5100e-003	0.0000	7.8176	7.8176	2.5300e-003	0.0000	7.8808
Total	**7.2900e-003**	**0.0792**	**0.0482**	**9.0000e-005**	**0.0210**	**3.8200e-003**	**0.0248**	**0.0103**	**3.5100e-003**	**0.0138**	**0.0000**	**7.8176**	**7.8176**	**2.5300e-003**	**0.0000**	**7.8808**

3.4 Grading - 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	0.0120	0.4203	0.0845	1.1400e-003	0.0243	1.3600e-003	0.0256	6.6800e-003	1.3000e-003	7.9700e-003	0.0000	110.1661	110.1661	5.6700e-003	0.0000	110.3079
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	1.5000e-004	1.1000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3115	0.3115	1.0000e-005	0.0000	0.3117
Total	**0.0122**	**0.4204**	**0.0856**	**1.1400e-003**	**0.0246**	**1.3600e-003**	**0.0260**	**6.7700e-003**	**1.3000e-003**	**8.0700e-003**	**0.0000**	**110.4777**	**110.4777**	**5.6800e-003**	**0.0000**	**110.6196**

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					0.0210	0.0000	0.0210	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2900e-003	0.0792	0.0482	9.0000e-005		3.8200e-003	3.8200e-003		3.5100e-003	3.5100e-003	0.0000	7.8176	7.8176	2.5300e-003	0.0000	7.8808
Total	**7.2900e-003**	**0.0792**	**0.0482**	**9.0000e-005**	**0.0210**	**3.8200e-003**	**0.0248**	**0.0103**	**3.5100e-003**	**0.0138**	**0.0000**	**7.8176**	**7.8176**	**2.5300e-003**	**0.0000**	**7.8808**

3.4 Grading - 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	0.0120	0.4203	0.0845	1.1400e-003	0.0243	1.3600e-003	0.0256	6.6800e-003	1.3000e-003	7.9700e-003	0.0000	110.1661	110.1661	5.6700e-003	0.0000	110.3079
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	1.5000e-004	1.1000e-004	1.1100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3115	0.3115	1.0000e-005	0.0000	0.3117
Total	**0.0122**	**0.4204**	**0.0856**	**1.1400e-003**	**0.0246**	**1.3600e-003**	**0.0260**	**6.7700e-003**	**1.3000e-003**	**8.0700e-003**	**0.0000**	**110.4777**	**110.4777**	**5.6800e-003**	**0.0000**	**110.6196**

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	0.1749	1.5829	1.3900	2.2200e-003		0.0922	0.0922		0.0867	0.0867	0.0000	191.0782	191.0782	0.0466	0.0000	192.2436
Total	**0.1749**	**1.5829**	**1.3900**	**2.2200e-003**		**0.0922**	**0.0922**		**0.0867**	**0.0867**	**0.0000**	**191.0782**	**191.0782**	**0.0466**	**0.0000**	**192.2436**

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	0.0144	0.4283	0.1077	1.0100e-003	0.0243	2.0900e-003	0.0264	7.0400e-003	2.0000e-003	9.0400e-003	0.0000	97.2005	97.2005	5.0100e-003	0.0000	97.3258
Worker	0.0317	0.0227	0.2351	7.3000e-004	0.0756	5.1000e-004	0.0761	0.0201	4.7000e-004	0.0206	0.0000	66.2513	66.2513	1.6000e-003	0.0000	66.2914
Total	**0.0461**	**0.4510**	**0.3427**	**1.7400e-003**	**0.1000**	**2.6000e-003**	**0.1026**	**0.0272**	**2.4700e-003**	**0.0296**	**0.0000**	**163.4517**	**163.4517**	**6.6100e-003**	**0.0000**	**163.6171**

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	0.1749	1.5829	1.3900	2.2200e-003		0.0922	0.0922		0.0867	0.0867	0.0000	191.0780	191.0780	0.0466	0.0000	192.2434
Total	**0.1749**	**1.5829**	**1.3900**	**2.2200e-003**		**0.0922**	**0.0922**		**0.0867**	**0.0867**	**0.0000**	**191.0780**	**191.0780**	**0.0466**	**0.0000**	**192.2434**

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	0.0144	0.4283	0.1077	1.0100e-003	0.0243	2.0900e-003	0.0264	7.0400e-003	2.0000e-003	9.0400e-003	0.0000	97.2005	97.2005	5.0100e-003	0.0000	97.3258
Worker	0.0317	0.0227	0.2351	7.3000e-004	0.0756	5.1000e-004	0.0761	0.0201	4.7000e-004	0.0206	0.0000	66.2513	66.2513	1.6000e-003	0.0000	66.2914
Total	**0.0461**	**0.4510**	**0.3427**	**1.7400e-003**	**0.1000**	**2.6000e-003**	**0.1026**	**0.0272**	**2.4700e-003**	**0.0296**	**0.0000**	**163.4517**	**163.4517**	**6.6100e-003**	**0.0000**	**163.6171**

3.5 Building Construction - 2021

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	0.0523	0.4794	0.4558	7.4000e-004		0.0264	0.0264		0.0248	0.0248	0.0000	63.7003	63.7003	0.0154	0.0000	64.0845
Total	**0.0523**	**0.4794**	**0.4558**	**7.4000e-004**		**0.0264**	**0.0264**		**0.0248**	**0.0248**	**0.0000**	**63.7003**	**63.7003**	**0.0154**	**0.0000**	**64.0845**

3.5 Building Construction - 2021

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	3.9300e-003	0.1293	0.0323	3.3000e-004	8.1100e-003	2.8000e-004	8.4000e-003	2.3500e-003	2.7000e-004	2.6200e-003	0.0000	32.0938	32.0938	1.5800e-003	0.0000	32.1333
Worker	9.7900e-003	6.7500e-003	0.0716	2.4000e-004	0.0252	1.6000e-004	0.0254	6.7100e-003	1.5000e-004	6.8600e-003	0.0000	21.3089	21.3089	4.8000e-004	0.0000	21.3208
Total	**0.0137**	**0.1360**	**0.1038**	**5.7000e-004**	**0.0333**	**4.4000e-004**	**0.0338**	**9.0600e-003**	**4.2000e-004**	**9.4800e-003**	**0.0000**	**53.4027**	**53.4027**	**2.0600e-003**	**0.0000**	**53.4541**

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	0.0523	0.4794	0.4558	7.4000e-004		0.0264	0.0264		0.0248	0.0248	0.0000	63.7002	63.7002	0.0154	0.0000	64.0844
Total	**0.0523**	**0.4794**	**0.4558**	**7.4000e-004**		**0.0264**	**0.0264**		**0.0248**	**0.0248**	**0.0000**	**63.7002**	**63.7002**	**0.0154**	**0.0000**	**64.0844**

3.5 Building Construction - 2021

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	3.9300e-003	0.1293	0.0323	3.3000e-004	8.1100e-003	2.8000e-004	8.4000e-003	2.3500e-003	2.7000e-004	2.6200e-003	0.0000	32.0938	32.0938	1.5800e-003	0.0000	32.1333
Worker	9.7900e-003	6.7500e-003	0.0716	2.4000e-004	0.0252	1.6000e-004	0.0254	6.7100e-003	1.5000e-004	6.8600e-003	0.0000	21.3089	21.3089	4.8000e-004	0.0000	21.3208
Total	**0.0137**	**0.1360**	**0.1038**	**5.7000e-004**	**0.0333**	**4.4000e-004**	**0.0338**	**9.0600e-003**	**4.2000e-004**	**9.4800e-003**	**0.0000**	**53.4027**	**53.4027**	**2.0600e-003**	**0.0000**	**53.4541**

3.6 Paving - 2021

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	5.4700e-003	0.0542	0.0613	9.0000e-005		2.8900e-003	2.8900e-003		2.6700e-003	2.6700e-003	0.0000	8.1853	8.1853	2.5700e-003	0.0000	8.2496
Paving	3.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8600e-003**	**0.0542**	**0.0613**	**9.0000e-005**		**2.8900e-003**	**2.8900e-003**		**2.6700e-003**	**2.6700e-003**	**0.0000**	**8.1853**	**8.1853**	**2.5700e-003**	**0.0000**	**8.2496**

3.6 Paving - 2021

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	3.1000e-004	2.1000e-004	2.2400e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6680	0.6680	1.0000e-005	0.0000	0.6684
Total	**3.1000e-004**	**2.1000e-004**	**2.2400e-003**	**1.0000e-005**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6680**	**0.6680**	**1.0000e-005**	**0.0000**	**0.6684**

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	5.4700e-003	0.0542	0.0613	9.0000e-005		2.8900e-003	2.8900e-003		2.6700e-003	2.6700e-003	0.0000	8.1853	8.1853	2.5700e-003	0.0000	8.2496
Paving	3.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8600e-003**	**0.0542**	**0.0613**	**9.0000e-005**		**2.8900e-003**	**2.8900e-003**		**2.6700e-003**	**2.6700e-003**	**0.0000**	**8.1853**	**8.1853**	**2.5700e-003**	**0.0000**	**8.2496**

3.6 Paving - 2021

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	3.1000e-004	2.1000e-004	2.2400e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6680	0.6680	1.0000e-005	0.0000	0.6684
Total	**3.1000e-004**	**2.1000e-004**	**2.2400e-003**	**1.0000e-005**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6680**	**0.6680**	**1.0000e-005**	**0.0000**	**0.6684**

3.7 Architectural Coating - 2021

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	1.3776					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**1.3786**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.7 Architectural Coating - 2021

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	3.5000e-004	2.4000e-004	2.5800e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7682	0.7682	2.0000e-005	0.0000	0.7686
Total	**3.5000e-004**	**2.4000e-004**	**2.5800e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.1000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.7682**	**0.7682**	**2.0000e-005**	**0.0000**	**0.7686**

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	1.3776					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0900e-003	7.6300e-003	9.0900e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.2766	1.2766	9.0000e-005	0.0000	1.2788
Total	**1.3786**	**7.6300e-003**	**9.0900e-003**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**9.0000e-005**	**0.0000**	**1.2788**

3.7 Architectural Coating - 2021

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	3.5000e-004	2.4000e-004	2.5800e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7682	0.7682	2.0000e-005	0.0000	0.7686
Total	**3.5000e-004**	**2.4000e-004**	**2.5800e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.1000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.7682**	**0.7682**	**2.0000e-005**	**0.0000**	**0.7686**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive 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	0.0923	0.4666	1.1338	4.0200e-003	0.3432	3.7200e-003	0.3470	0.0921	3.4800e-003	0.0956	0.0000	369.0571	369.0571	0.0134	0.0000	369.3912
Unmitigated	0.0923	0.4666	1.1338	4.0200e-003	0.3432	3.7200e-003	0.3470	0.0921	3.4800e-003	0.0956	0.0000	369.0571	369.0571	0.0134	0.0000	369.3912

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	315.88	315.88	315.88	922,205	922,205
Parking Lot	0.00	0.00	0.00		
Total	315.88	315.88	315.88	922,205	922,205

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

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	325.4861	325.4861	0.0287	5.9400e-003	327.9737
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	325.4861	325.4861	0.0287	5.9400e-003	327.9737
NaturalGas Mitigated	0.0375	0.3410	0.2864	2.0500e-003		0.0259	0.0259		0.0259	0.0259	0.0000	371.1795	371.1795	7.1100e-003	6.8000e-003	373.3852
NaturalGas Unmitigated	0.0375	0.3410	0.2864	2.0500e-003		0.0259	0.0259		0.0259	0.0259	0.0000	371.1795	371.1795	7.1100e-003	6.8000e-003	373.3852

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					
General Light Industry	6.95564e+006	0.0375	0.3410	0.2864	2.0500e-003		0.0259	0.0259		0.0259	0.0259	0.0000	371.1795	371.1795	7.1100e-003	6.8000e-003	373.3852
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
Total		**0.0375**	**0.3410**	**0.2864**	**2.0500e-003**		**0.0259**	**0.0259**		**0.0259**	**0.0259**	**0.0000**	**371.1795**	**371.1795**	**7.1100e-003**	**6.8000e-003**	**373.3852**

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					
General Light Industry	6.95564e+006	0.0375	0.3410	0.2864	2.0500e-003		0.0259	0.0259		0.0259	0.0259	0.0000	371.1795	371.1795	7.1100e-003	6.8000e-003	373.3852
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
Total		**0.0375**	**0.3410**	**0.2864**	**2.0500e-003**		**0.0259**	**0.0259**		**0.0259**	**0.0259**	**0.0000**	**371.1795**	**371.1795**	**7.1100e-003**	**6.8000e-003**	**373.3852**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.17792e+006	324.8179	0.0287	5.9300e-003	327.3005
Parking Lot	4480	0.6682	6.0000e-005	1.0000e-005	0.6733
Total		**325.4861**	**0.0287**	**5.9400e-003**	**327.9737**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.17792e+006	324.8179	0.0287	5.9300e-003	327.3005
Parking Lot	4480	0.6682	6.0000e-005	1.0000e-005	0.6733
Total		**325.4861**	**0.0287**	**5.9400e-003**	**327.9737**

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	1.1686	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.6300e-003
Unmitigated	1.1686	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.6300e-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	0.1378					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0306					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.6300e-003
Total	**1.1686**	**3.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.2800e-003**	**5.2800e-003**	**1.0000e-005**	**0.0000**	**5.6300e-003**

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	0.1378					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0306					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.6300e-003
Total	**1.1686**	**3.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.2800e-003**	**5.2800e-003**	**1.0000e-005**	**0.0000**	**5.6300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	68.5501	1.9912	0.0478	132.5770
Unmitigated	68.5501	1.9912	0.0478	132.5770

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	60.9737 / 0	68.5501	1.9912	0.0478	132.5770
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**68.5501**	**1.9912**	**0.0478**	**132.5770**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	60.9737 / 0	68.5501	1.9912	0.0478	132.5770
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**68.5501**	**1.9912**	**0.0478**	**132.5770**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	66.3679	3.9222	0.0000	164.4237
Unmitigated	66.3679	3.9222	0.0000	164.4237

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	326.95	66.3679	3.9222	0.0000	164.4237
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**66.3679**	**3.9222**	**0.0000**	**164.4237**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	326.95	66.3679	3.9222	0.0000	164.4237
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**66.3679**	**3.9222**	**0.0000**	**164.4237**

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

Cupertino Public Storage Project

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	263.67	1000sqft	2.70	263,671.00	0
Parking Lot	32.00	Space	0.30	12,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on a 5-year average (2016-2020), PG&E, 2015

Land Use - Building 1 would be approximately 129,856 square feet and Building 2 would be approximately 133,815 square feet. total of 32 automobile parking spaces would be provided throughout the 3-acre project site.

Construction Phase - Approximately 13-month construction period

Demolition - Nine on-site existing buildings totaling 54,186 square feet would be demolished

Grading - Approximately 23,000 cubic yards of soil off-haul

Vehicle Trips - Trip generation based on Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California

Mobile Land Use Mitigation -

Cupertino Public Storage Project - Bay Area AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	23,000.00
tblLandUse	LandUseSquareFeet	263,670.00	263,671.00
tblLandUse	LotAcreage	6.05	2.70
tblLandUse	LotAcreage	0.29	0.30
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblVehicleTrips	ST_TR	1.32	1.20
tblVehicleTrips	SU_TR	0.68	1.20
tblVehicleTrips	WD_TR	6.97	1.20

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					
2020	6.4348	163.6722	43.7340	0.4121	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	43,762.3132	43,762.3132	2.9714	0.0000	43,836.5970
2021	275.8033	22.3004	20.5211	0.0484	1.2575	0.9747	2.2322	0.3405	0.9164	1.2569	0.0000	4,772.3504	4,772.3504	0.6976	0.0000	4,789.7899
Maximum	**275.8033**	**163.6722**	**43.7340**	**0.4121**	**18.2141**	**2.1984**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**43,762.3132**	**43,762.3132**	**2.9714**	**0.0000**	**43,836.5970**

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					
2020	6.4348	163.6722	43.7340	0.4121	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	43,762.3132	43,762.3132	2.9714	0.0000	43,836.5970
2021	275.8033	22.3004	20.5211	0.0484	1.2575	0.9747	2.2322	0.3405	0.9164	1.2569	0.0000	4,772.3504	4,772.3504	0.6976	0.0000	4,789.7899
Maximum	**275.8033**	**163.6722**	**43.7340**	**0.4121**	**18.2141**	**2.1984**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**43,762.3132**	**43,762.3132**	**2.9714**	**0.0000**	**43,836.5970**

	ROG	NOx	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	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Energy	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
Mobile	0.5747	2.4743	6.5509	0.0234	1.9594	0.0204	1.9798	0.5243	0.0191	0.5434		2,366.8972	2,366.8972	0.0820		2,368.9464
Total	**7.1850**	**4.3429**	**8.1506**	**0.0346**	**1.9594**	**0.1625**	**2.1219**	**0.5243**	**0.1612**	**0.6855**		**4,608.9090**	**4,608.9090**	**0.1251**	**0.0411**	**4,624.2853**

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	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Energy	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
Mobile	0.5747	2.4743	6.5509	0.0234	1.9594	0.0204	1.9798	0.5243	0.0191	0.5434		2,366.8972	2,366.8972	0.0820		2,368.9464
Total	**7.1850**	**4.3429**	**8.1506**	**0.0346**	**1.9594**	**0.1625**	**2.1219**	**0.5243**	**0.1612**	**0.6855**		**4,608.9090**	**4,608.9090**	**0.1251**	**0.0411**	**4,624.2853**

	ROG	NOx	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**

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	4/6/2020	5/1/2020	5	20	
2	Site Preparation	Site Preparation	5/2/2020	5/6/2020	5	3	
3	Grading	Grading	5/7/2020	5/14/2020	5	6	
4	Building Construction	Building Construction	5/15/2020	3/18/2021	5	220	
5	Paving	Paving	3/19/2021	4/1/2021	5	10	
6	Architectural Coating	Architectural Coating	4/2/2021	4/15/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 395,507; Non-Residential Outdoor: 131,836; Striped Parking Area: 768 (Architectural Coating – sqft)

OffRoad Equipment

Cupertino Public Storage Project - Bay Area AQMD Air District, Summer

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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	246.00	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	6	15.00	0.00	2,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	116.00	45.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	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	lb/day										lb/day					
Fugitive Dust					2.6669	0.0000	2.6669	0.4038	0.0000	0.4038			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**2.6669**	**1.6587**	**4.3256**	**0.4038**	**1.5419**	**1.9456**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.1015	3.5233	0.7002	9.7900e-003	0.2149	0.0115	0.2264	0.0589	0.0110	0.0699		1,046.4638	1,046.4638	0.0524		1,047.7725
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.1536**	**3.5548**	**1.1027**	**0.0110**	**0.3381**	**0.0123**	**0.3504**	**0.0916**	**0.0118**	**0.1033**		**1,169.5802**	**1,169.5802**	**0.0553**		**1,170.9632**

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					2.6669	0.0000	2.6669	0.4038	0.0000	0.4038			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**2.6669**	**1.6587**	**4.3256**	**0.4038**	**1.5419**	**1.9456**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.1015	3.5233	0.7002	9.7900e-003	0.2149	0.0115	0.2264	0.0589	0.0110	0.0699		1,046.4638	1,046.4638	0.0524		1,047.7725
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.1536**	**3.5548**	**1.1027**	**0.0110**	**0.3381**	**0.0123**	**0.3504**	**0.0916**	**0.0118**	**0.1033**		**1,169.5802**	**1,169.5802**	**0.0553**		**1,170.9632**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 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	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0626**	**0.0379**	**0.4830**	**1.4800e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.8000e-004**	**0.0401**		**147.7398**	**147.7398**	**3.5600e-003**		**147.8288**

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	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 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	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0626**	**0.0379**	**0.4830**	**1.4800e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.8000e-004**	**0.0401**		**147.7398**	**147.7398**	**3.5600e-003**		**147.8288**

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	lb/day										lb/day					
Fugitive Dust					6.9859	0.0000	6.9859	3.4331	0.0000	3.4331			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.9859**	**1.2734**	**8.2593**	**3.4331**	**1.1716**	**4.6047**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 Grading - 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	3.9539	137.2548	27.2785	0.3812	8.3709	0.4487	8.8196	2.2939	0.4293	2.7232		40,766.7116	40,766.7116	2.0394		40,817.6958
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**4.0060**	**137.2863**	**27.6810**	**0.3825**	**8.4941**	**0.4495**	**8.9436**	**2.3266**	**0.4300**	**2.7566**		**40,889.8280**	**40,889.8280**	**2.0423**		**40,940.8864**

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					6.9859	0.0000	6.9859	3.4331	0.0000	3.4331			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.9859**	**1.2734**	**8.2593**	**3.4331**	**1.1716**	**4.6047**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 Grading - 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	3.9539	137.2548	27.2785	0.3812	8.3709	0.4487	8.8196	2.2939	0.4293	2.7232		40,766.7116	40,766.7116	2.0394		40,817.6958
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**4.0060**	**137.2863**	**27.6810**	**0.3825**	**8.4941**	**0.4495**	**8.9436**	**2.3266**	**0.4300**	**2.7566**		**40,889.8280**	**40,889.8280**	**2.0423**		**40,940.8864**

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	0.1706	5.1283	1.2233	0.0124	0.3046	0.0251	0.3297	0.0877	0.0241	0.1117		1,312.6862	1,312.6862	0.0646		1,314.3023
Worker	0.4032	0.2441	3.1123	9.5500e-003	0.9529	6.1700e-003	0.9591	0.2528	5.6800e-003	0.2584		952.1008	952.1008	0.0229		952.6744
Total	**0.5738**	**5.3724**	**4.3356**	**0.0220**	**1.2575**	**0.0313**	**1.2888**	**0.3404**	**0.0297**	**0.3702**		**2,264.7870**	**2,264.7870**	**0.0876**		**2,266.9767**

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	0.1706	5.1283	1.2233	0.0124	0.3046	0.0251	0.3297	0.0877	0.0241	0.1117		1,312.6862	1,312.6862	0.0646		1,314.3023
Worker	0.4032	0.2441	3.1123	9.5500e-003	0.9529	6.1700e-003	0.9591	0.2528	5.6800e-003	0.2584		952.1008	952.1008	0.0229		952.6744
Total	**0.5738**	**5.3724**	**4.3356**	**0.0220**	**1.2575**	**0.0313**	**1.2888**	**0.3404**	**0.0297**	**0.3702**		**2,264.7870**	**2,264.7870**	**0.0876**		**2,266.9767**

3.5 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	0.1396	4.6504	1.0966	0.0123	0.3046	0.0101	0.3147	0.0877	9.6400e-003	0.0973		1,300.3134	1,300.3134	0.0610		1,301.8392
Worker	0.3730	0.2180	2.8493	9.2200e-003	0.9529	6.0000e-003	0.9589	0.2528	5.5200e-003	0.2583		918.6730	918.6730	0.0205		919.1864
Total	**0.5125**	**4.8683**	**3.9459**	**0.0215**	**1.2575**	**0.0161**	**1.2736**	**0.3405**	**0.0152**	**0.3556**		**2,218.9865**	**2,218.9865**	**0.0816**		**2,221.0256**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	0.1396	4.6504	1.0966	0.0123	0.3046	0.0101	0.3147	0.0877	9.6400e-003	0.0973		1,300.3134	1,300.3134	0.0610		1,301.8392
Worker	0.3730	0.2180	2.8493	9.2200e-003	0.9529	6.0000e-003	0.9589	0.2528	5.5200e-003	0.2583		918.6730	918.6730	0.0205		919.1864
Total	**0.5125**	**4.8683**	**3.9459**	**0.0215**	**1.2575**	**0.0161**	**1.2736**	**0.3405**	**0.0152**	**0.3556**		**2,218.9865**	**2,218.9865**	**0.0816**		**2,221.0256**

3.6 Paving - 2021

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1726**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**		**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.6 Paving - 2021

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	0.0643	0.0376	0.4913	1.5900e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		158.3919	158.3919	3.5400e-003		158.4804
Total	**0.0643**	**0.0376**	**0.4913**	**1.5900e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**158.3919**	**158.3919**	**3.5400e-003**		**158.4804**

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1726**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**	**0.0000**	**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.6 Paving - 2021

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	0.0643	0.0376	0.4913	1.5900e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		158.3919	158.3919	3.5400e-003		158.4804
Total	**0.0643**	**0.0376**	**0.4913**	**1.5900e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**158.3919**	**158.3919**	**3.5400e-003**		**158.4804**

3.7 Architectural Coating - 2021

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	275.5104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**275.7293**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0740	0.0432	0.5650	1.8300e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		182.1507	182.1507	4.0700e-003		182.2525
Total	**0.0740**	**0.0432**	**0.5650**	**1.8300e-003**	**0.1889**	**1.1900e-003**	**0.1901**	**0.0501**	**1.1000e-003**	**0.0512**		**182.1507**	**182.1507**	**4.0700e-003**		**182.2525**

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	275.5104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**275.7293**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0740	0.0432	0.5650	1.8300e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		182.1507	182.1507	4.0700e-003		182.2525
Total	**0.0740**	**0.0432**	**0.5650**	**1.8300e-003**	**0.1889**	**1.1900e-003**	**0.1901**	**0.0501**	**1.1000e-003**	**0.0512**		**182.1507**	**182.1507**	**4.0700e-003**		**182.2525**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive 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	0.5747	2.4743	6.5509	0.0234	1.9594	0.0204	1.9798	0.5243	0.0191	0.5434		2,366.8972	2,366.8972	0.0820		2,368.9464
Unmitigated	0.5747	2.4743	6.5509	0.0234	1.9594	0.0204	1.9798	0.5243	0.0191	0.5434		2,366.8972	2,366.8972	0.0820		2,368.9464

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	315.88	315.88	315.88	922,205	922,205
Parking Lot	0.00	0.00	0.00		
Total	315.88	315.88	315.88	922,205	922,205

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

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	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
NaturalGas Unmitigated	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699

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					
General Light Industry	19056.6	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
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
Total		**0.2055**	**1.8683**	**1.5694**	**0.0112**		**0.1420**	**0.1420**		**0.1420**	**0.1420**		**2,241.9471**	**2,241.9471**	**0.0430**	**0.0411**	**2,255.2699**

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					
General Light Industry	19.0566	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
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
Total		**0.2055**	**1.8683**	**1.5694**	**0.0112**		**0.1420**	**0.1420**		**0.1420**	**0.1420**		**2,241.9471**	**2,241.9471**	**0.0430**	**0.0411**	**2,255.2699**

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	lb/day										lb/day					
Mitigated	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Unmitigated	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690

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	0.7548					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Total	**6.4047**	**2.8000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.7000e-004**		**0.0690**

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	0.7548					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Total	**6.4047**	**2.8000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.7000e-004**		**0.0690**

7.0 Water Detail

7.1 Mitigation Measures Water

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

Cupertino Public Storage Project

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	263.67	1000sqft	2.70	263,671.00	0
Parking Lot	32.00	Space	0.30	12,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on a 5-year average (2016-2020), PG&E, 2015

Land Use - Building 1 would be approximately 129,856 square feet and Building 2 would be approximately 133,815 square feet. total of 32 automobile parking spaces would be provided throughout the 3-acre project site.

Construction Phase - Approximately 13-month construction period

Demolition - Nine on-site existing buildings totaling 54,186 square feet would be demolished

Grading - Approximately 23,000 cubic yards of soil off-haul

Vehicle Trips - Trip generation based on Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	23,000.00
tblLandUse	LandUseSquareFeet	263,670.00	263,671.00
tblLandUse	LotAcreage	6.05	2.70
tblLandUse	LotAcreage	0.29	0.30
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblVehicleTrips	ST_TR	1.32	1.20
tblVehicleTrips	SU_TR	0.68	1.20
tblVehicleTrips	WD_TR	6.97	1.20

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					
2020	6.5460	167.0478	45.7976	0.4056	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	43,067.8787	43,067.8787	3.0737	0.0000	43,144.7205
2021	275.8077	22.3917	20.5014	0.0474	1.2575	0.9750	2.2326	0.3405	0.9168	1.2572	0.0000	4,666.9486	4,666.9486	0.7012	0.0000	4,684.4783
Maximum	**275.8077**	**167.0478**	**45.7976**	**0.4056**	**18.2141**	**2.1984**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**43,067.8787**	**43,067.8787**	**3.0737**	**0.0000**	**43,144.7205**

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					
2020	6.5460	167.0478	45.7976	0.4056	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	43,067.8787	43,067.8787	3.0737	0.0000	43,144.7205
2021	275.8077	22.3917	20.5014	0.0474	1.2575	0.9750	2.2326	0.3405	0.9168	1.2572	0.0000	4,666.9486	4,666.9486	0.7012	0.0000	4,684.4783
Maximum	**275.8077**	**167.0478**	**45.7976**	**0.4056**	**18.2141**	**2.1984**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**43,067.8787**	**43,067.8787**	**3.0737**	**0.0000**	**43,144.7205**

	ROG	NOx	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	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Energy	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
Mobile	0.5044	2.6187	6.4938	0.0219	1.9594	0.0205	1.9799	0.5243	0.0192	0.5435		2,215.8779	2,215.8779	0.0828		2,217.9474
Total	**7.1147**	**4.4873**	**8.0935**	**0.0331**	**1.9594**	**0.1626**	**2.1220**	**0.5243**	**0.1613**	**0.6856**		**4,457.8898**	**4,457.8898**	**0.1259**	**0.0411**	**4,473.2863**

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	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Energy	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
Mobile	0.5044	2.6187	6.4938	0.0219	1.9594	0.0205	1.9799	0.5243	0.0192	0.5435		2,215.8779	2,215.8779	0.0828		2,217.9474
Total	**7.1147**	**4.4873**	**8.0935**	**0.0331**	**1.9594**	**0.1626**	**2.1220**	**0.5243**	**0.1613**	**0.6856**		**4,457.8898**	**4,457.8898**	**0.1259**	**0.0411**	**4,473.2863**

	ROG	NOx	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**

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	4/6/2020	5/1/2020	5	20	
2	Site Preparation	Site Preparation	5/2/2020	5/6/2020	5	3	
3	Grading	Grading	5/7/2020	5/14/2020	5	6	
4	Building Construction	Building Construction	5/15/2020	3/18/2021	5	220	
5	Paving	Paving	3/19/2021	4/1/2021	5	10	
6	Architectural Coating	Architectural Coating	4/2/2021	4/15/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 395,507; Non-Residential Outdoor: 131,836; Striped Parking Area: 768 (Architectural Coating – sqft)

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	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	246.00	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	6	15.00	0.00	2,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	116.00	45.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	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	lb/day										lb/day					
Fugitive Dust					2.6669	0.0000	2.6669	0.4038	0.0000	0.4038			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**2.6669**	**1.6587**	**4.3256**	**0.4038**	**1.5419**	**1.9456**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.1043	3.6097	0.7538	9.6200e-003	0.2149	0.0117	0.2266	0.0589	0.0112	0.0701		1,028.8871	1,028.8871	0.0550		1,030.2616
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.1594**	**3.6487**	**1.1318**	**0.0108**	**0.3381**	**0.0125**	**0.3506**	**0.0916**	**0.0120**	**0.1035**		**1,142.2969**	**1,142.2969**	**0.0578**		**1,143.7408**

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					2.6669	0.0000	2.6669	0.4038	0.0000	0.4038			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**2.6669**	**1.6587**	**4.3256**	**0.4038**	**1.5419**	**1.9456**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 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	0.1043	3.6097	0.7538	9.6200e-003	0.2149	0.0117	0.2266	0.0589	0.0112	0.0701		1,028.8871	1,028.8871	0.0550		1,030.2616
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.1594**	**3.6487**	**1.1318**	**0.0108**	**0.3381**	**0.0125**	**0.3506**	**0.0916**	**0.0120**	**0.1035**		**1,142.2969**	**1,142.2969**	**0.0578**		**1,143.7408**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 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	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0662**	**0.0468**	**0.4536**	**1.3700e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.8000e-004**	**0.0401**		**136.0918**	**136.0918**	**3.3300e-003**		**136.1750**

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	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 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	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0662**	**0.0468**	**0.4536**	**1.3700e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.8000e-004**	**0.0401**		**136.0918**	**136.0918**	**3.3300e-003**		**136.1750**

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	lb/day										lb/day					
Fugitive Dust					6.9859	0.0000	6.9859	3.4331	0.0000	3.4331			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.9859**	**1.2734**	**8.2593**	**3.4331**	**1.1716**	**4.6047**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 Grading - 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	4.0621	140.6229	29.3666	0.3748	8.3709	0.4565	8.8274	2.2939	0.4367	2.7307		40,081.9838	40,081.9838	2.1419		40,135.5307
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**4.1172**	**140.6619**	**29.7446**	**0.3760**	**8.4941**	**0.4573**	**8.9514**	**2.3266**	**0.4375**	**2.7641**		**40,195.3936**	**40,195.3936**	**2.1447**		**40,249.0098**

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					6.9859	0.0000	6.9859	3.4331	0.0000	3.4331			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.9859**	**1.2734**	**8.2593**	**3.4331**	**1.1716**	**4.6047**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

3.4 Grading - 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	4.0621	140.6229	29.3666	0.3748	8.3709	0.4565	8.8274	2.2939	0.4367	2.7307		40,081.9838	40,081.9838	2.1419		40,135.5307
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**4.1172**	**140.6619**	**29.7446**	**0.3760**	**8.4941**	**0.4573**	**8.9514**	**2.3266**	**0.4375**	**2.7641**		**40,195.3936**	**40,195.3936**	**2.1447**		**40,249.0098**

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	0.1795	5.1857	1.3995	0.0121	0.3046	0.0256	0.3302	0.0877	0.0245	0.1121		1,279.4726	1,279.4726	0.0699		1,281.2206
Worker	0.4265	0.3016	2.9231	8.8000e-003	0.9529	6.1700e-003	0.9591	0.2528	5.6800e-003	0.2584		877.0359	877.0359	0.0215		877.5722
Total	**0.6060**	**5.4873**	**4.3225**	**0.0209**	**1.2575**	**0.0317**	**1.2892**	**0.3404**	**0.0301**	**0.3706**		**2,156.5085**	**2,156.5085**	**0.0914**		**2,158.7928**

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	0.1795	5.1857	1.3995	0.0121	0.3046	0.0256	0.3302	0.0877	0.0245	0.1121		1,279.4726	1,279.4726	0.0699		1,281.2206
Worker	0.4265	0.3016	2.9231	8.8000e-003	0.9529	6.1700e-003	0.9591	0.2528	5.6800e-003	0.2584		877.0359	877.0359	0.0215		877.5722
Total	**0.6060**	**5.4873**	**4.3225**	**0.0209**	**1.2575**	**0.0317**	**1.2892**	**0.3404**	**0.0301**	**0.3706**		**2,156.5085**	**2,156.5085**	**0.0914**		**2,158.7928**

3.5 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	0.1478	4.6903	1.2604	0.0120	0.3046	0.0104	0.3150	0.0877	9.9700e-003	0.0977		1,267.3222	1,267.3222	0.0660		1,268.9728
Worker	0.3951	0.2693	2.6658	8.4900e-003	0.9529	6.0000e-003	0.9589	0.2528	5.5200e-003	0.2583		846.2625	846.2625	0.0192		846.7412
Total	**0.5430**	**4.9596**	**3.9262**	**0.0205**	**1.2575**	**0.0164**	**1.2739**	**0.3405**	**0.0155**	**0.3559**		**2,113.5847**	**2,113.5847**	**0.0852**		**2,115.7140**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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	0.1478	4.6903	1.2604	0.0120	0.3046	0.0104	0.3150	0.0877	9.9700e-003	0.0977		1,267.3222	1,267.3222	0.0660		1,268.9728
Worker	0.3951	0.2693	2.6658	8.4900e-003	0.9529	6.0000e-003	0.9589	0.2528	5.5200e-003	0.2583		846.2625	846.2625	0.0192		846.7412
Total	**0.5430**	**4.9596**	**3.9262**	**0.0205**	**1.2575**	**0.0164**	**1.2739**	**0.3405**	**0.0155**	**0.3559**		**2,113.5847**	**2,113.5847**	**0.0852**		**2,115.7140**

3.6 Paving - 2021

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1726**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**		**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.6 Paving - 2021

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	0.0681	0.0464	0.4596	1.4600e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		145.9073	145.9073	3.3000e-003		145.9899
Total	**0.0681**	**0.0464**	**0.4596**	**1.4600e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**145.9073**	**145.9073**	**3.3000e-003**		**145.9899**

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	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1726**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**	**0.0000**	**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

3.6 Paving - 2021

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	0.0681	0.0464	0.4596	1.4600e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		145.9073	145.9073	3.3000e-003		145.9899
Total	**0.0681**	**0.0464**	**0.4596**	**1.4600e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**145.9073**	**145.9073**	**3.3000e-003**		**145.9899**

3.7 Architectural Coating - 2021

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	275.5104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**275.7293**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0783	0.0534	0.5286	1.6800e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		167.7934	167.7934	3.8000e-003		167.8884
Total	**0.0783**	**0.0534**	**0.5286**	**1.6800e-003**	**0.1889**	**1.1900e-003**	**0.1901**	**0.0501**	**1.1000e-003**	**0.0512**		**167.7934**	**167.7934**	**3.8000e-003**		**167.8884**

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	275.5104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**275.7293**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	0.0783	0.0534	0.5286	1.6800e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		167.7934	167.7934	3.8000e-003		167.8884
Total	**0.0783**	**0.0534**	**0.5286**	**1.6800e-003**	**0.1889**	**1.1900e-003**	**0.1901**	**0.0501**	**1.1000e-003**	**0.0512**		**167.7934**	**167.7934**	**3.8000e-003**		**167.8884**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive 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	0.5044	2.6187	6.4938	0.0219	1.9594	0.0205	1.9799	0.5243	0.0192	0.5435		2,215.8779	2,215.8779	0.0828		2,217.9474
Unmitigated	0.5044	2.6187	6.4938	0.0219	1.9594	0.0205	1.9799	0.5243	0.0192	0.5435		2,215.8779	2,215.8779	0.0828		2,217.9474

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	315.88	315.88	315.88	922,205	922,205
Parking Lot	0.00	0.00	0.00		
Total	315.88	315.88	315.88	922,205	922,205

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

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	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
NaturalGas Unmitigated	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699

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					
General Light Industry	19056.6	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
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
Total		**0.2055**	**1.8683**	**1.5694**	**0.0112**		**0.1420**	**0.1420**		**0.1420**	**0.1420**		**2,241.9471**	**2,241.9471**	**0.0430**	**0.0411**	**2,255.2699**

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					
General Light Industry	19.0566	0.2055	1.8683	1.5694	0.0112		0.1420	0.1420		0.1420	0.1420		2,241.9471	2,241.9471	0.0430	0.0411	2,255.2699
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
Total		**0.2055**	**1.8683**	**1.5694**	**0.0112**		**0.1420**	**0.1420**		**0.1420**	**0.1420**		**2,241.9471**	**2,241.9471**	**0.0430**	**0.0411**	**2,255.2699**

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	lb/day										lb/day					
Mitigated	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Unmitigated	6.4048	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690

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	0.7548					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Total	**6.4047**	**2.8000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.7000e-004**		**0.0690**

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	0.7548					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.7000e-004		0.0690
Total	**6.4047**	**2.8000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.7000e-004**		**0.0690**

7.0 Water Detail

7.1 Mitigation Measures Water

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

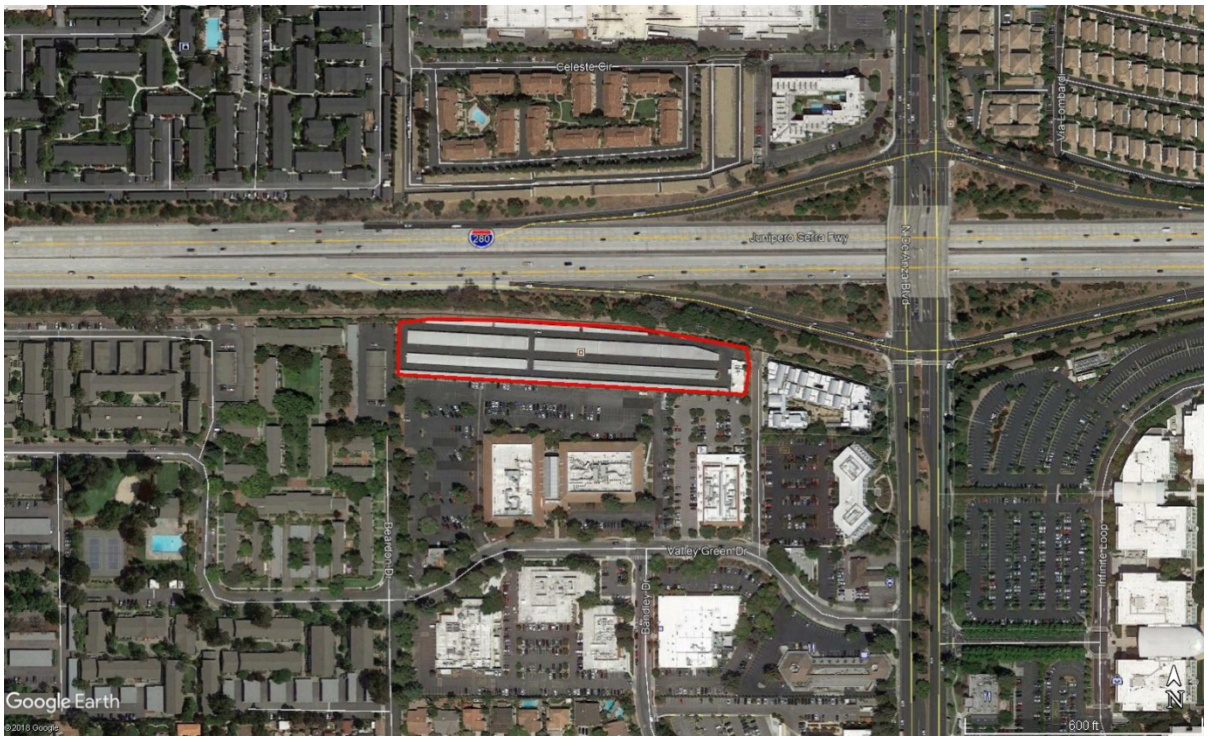
Equipment Type	Number

11.0 Vegetation

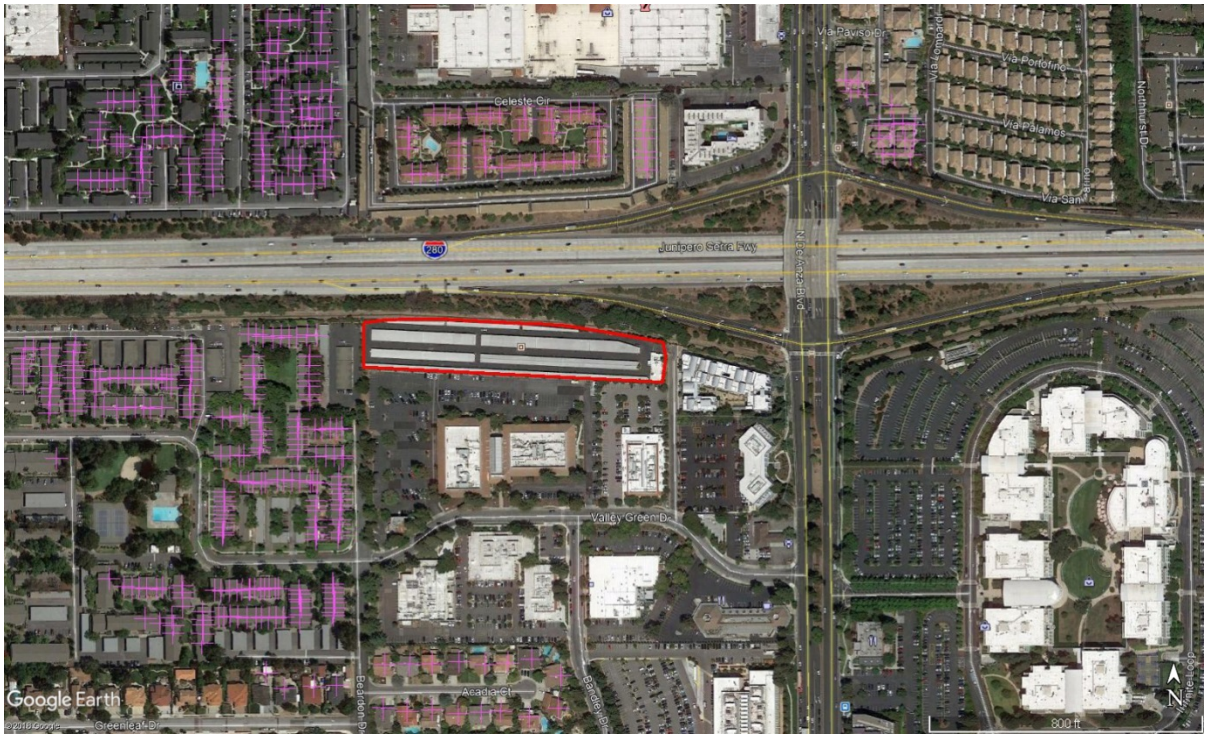
ATTACHMENT B

HRA MODEL SNAPSHOTS

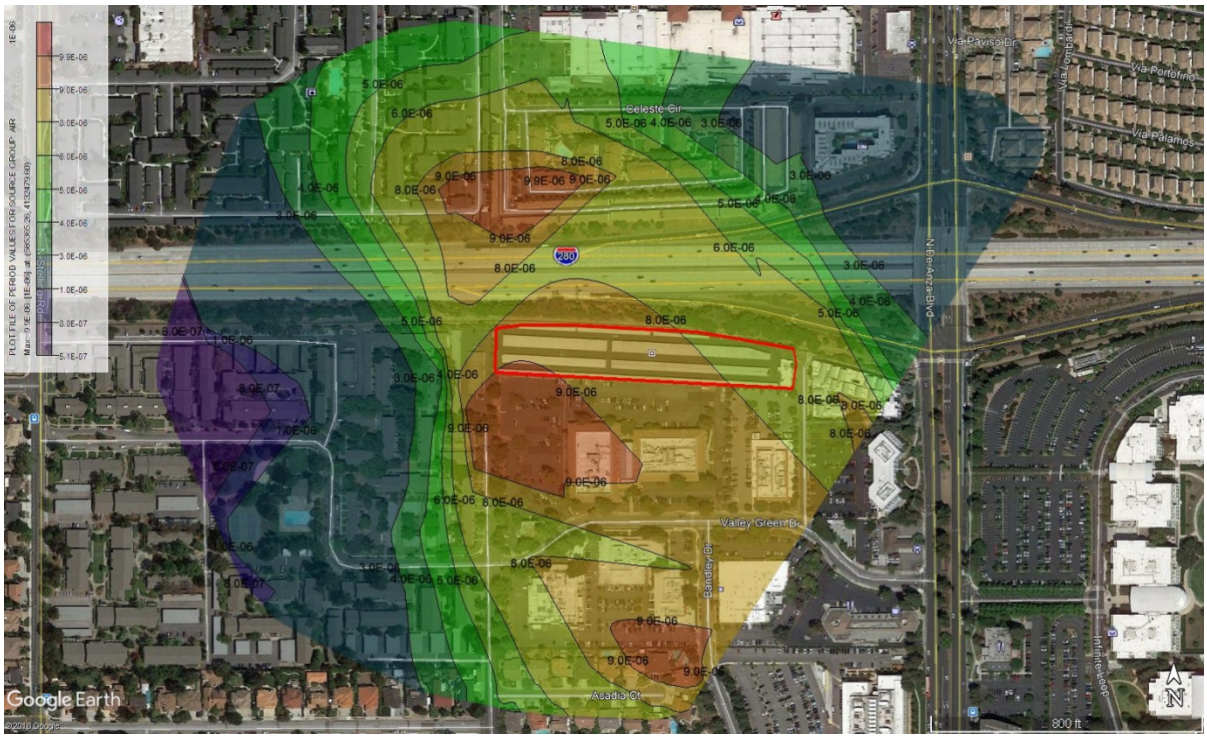
Project Boundary



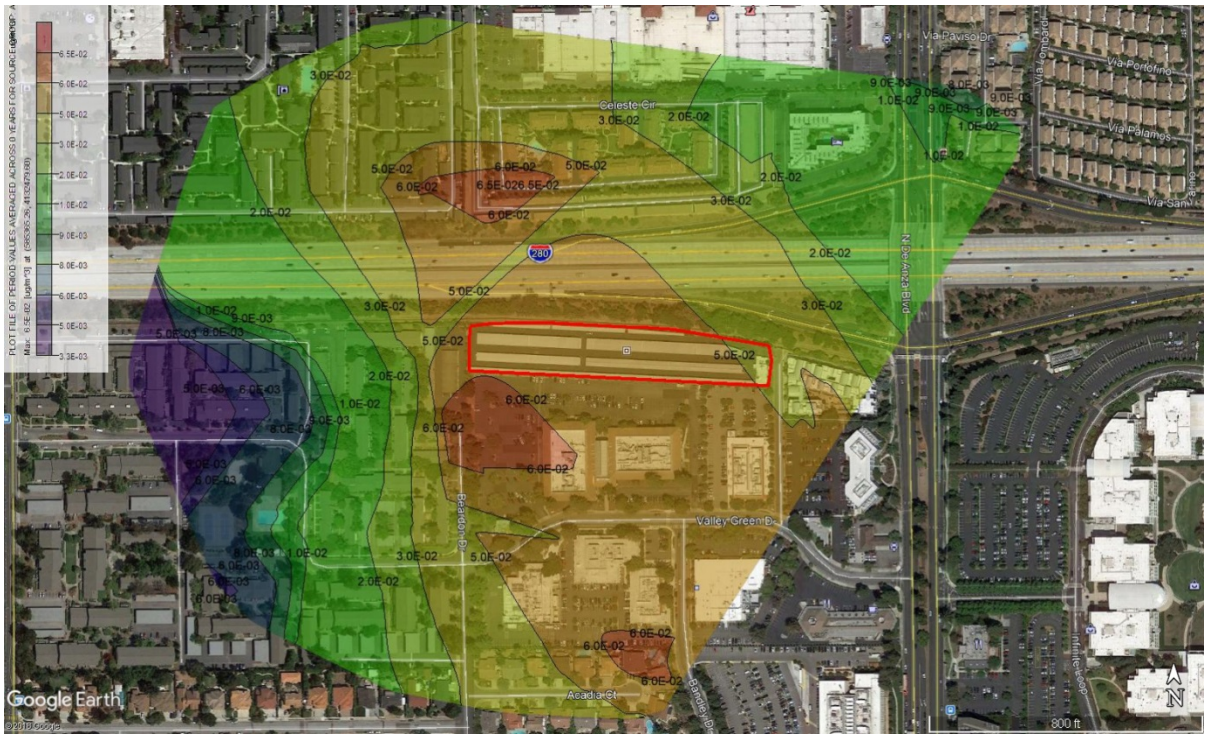
Residential Receptors



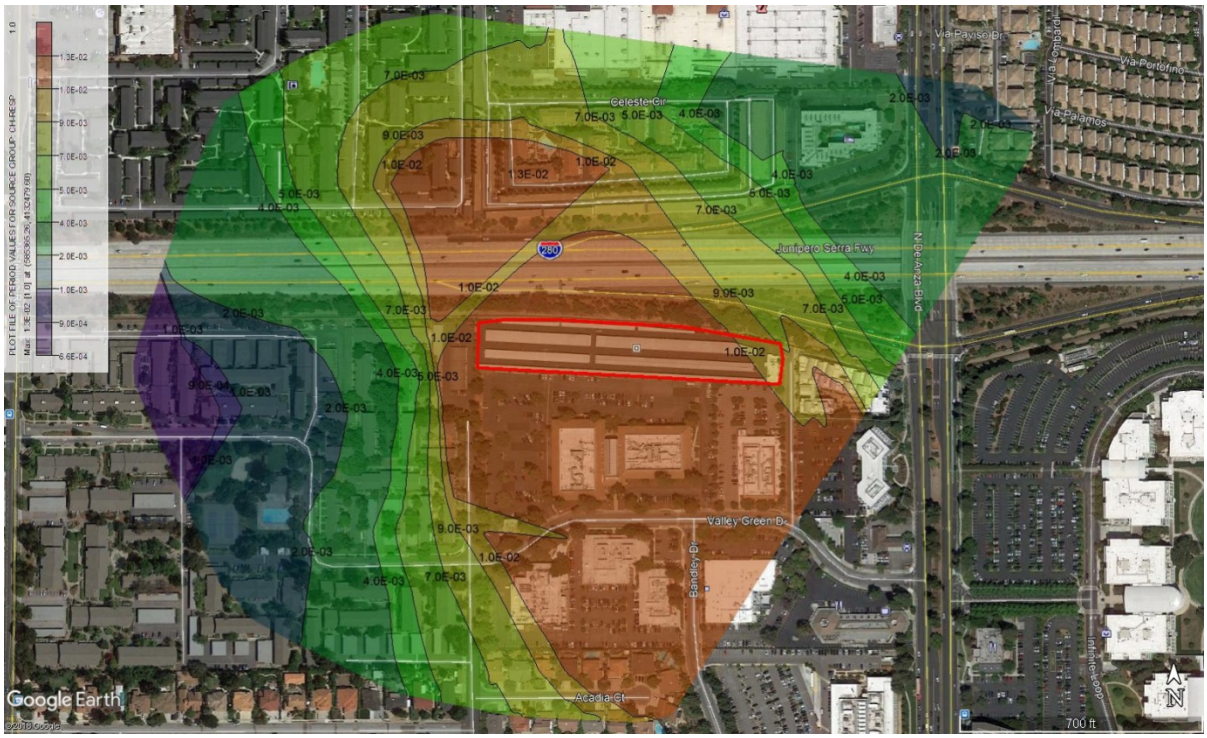
Cancer Risk



$PM_{2.5}$ Concentrations



Chronic Inhalation Hazard Index



APPENDIX C

NOISE ANALYSIS

This page intentionally left blank

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: February 6, 2019

TO: Erick Serrano, Associate Planner, City of Cupertino

FROM: Amy Fischer, Principal
Matthew Wiswell, Project Manager

SUBJECT: Noise Analysis – Cupertino Public Storage Project

INTRODUCTION

This Noise Analysis Memorandum for the proposed Cupertino Public Storage Project (project) in the City of Cupertino (City) has been prepared to satisfy the City's requirement for a project-specific noise impact analysis by examining the impacts of the proposed project and evaluating the mitigation measures required for the project.

PROJECT DESCRIPTION

The approximately 3-acre (130,462-square-foot) project site is located at 20565 Valley Green Drive in the City of Cupertino in Santa Clara County (Assessor's Parcel Number [APN] 326-10-044). The site is bounded by Interstate 280 (I-280) to the north, residential uses to the east, office uses and associated parking lots to the south, and residential uses to the west.

The project site is developed with nine single-story buildings totaling 54,186 square feet, which would be demolished as part of the project. The proposed project would include the construction of two new four-story self-storage buildings, each with a below-grade basement. Building 1 would be approximately 129,856 square feet, and would include an office space in the northeast corner of the building. Building 2 would be approximately 133,815 square feet, and would include a manager's apartment in the northwest corner of the building.

Both of the proposed buildings would include a lobby in the center of the building with elevators and stairwells, as well as additional stairwells on the east and west sides of the buildings. A total of 32 automobile parking spaces and two bicycle parking spaces would be provided throughout the project site. Rental office hours would be Monday through Friday from 9:30 a.m. to 6:00 p.m. and Saturday and Sunday from 9:30 a.m. to 5:00 p.m. Customers would have access to the self-storage buildings between 6:00 a.m. and 9:00 p.m. daily.

To prepare the project site for construction, all nine of the existing buildings would be demolished and 17 trees would be removed. The project site would be excavated down to a depth of approximately 12 feet for the basements of both of the proposed buildings. Additionally, trenching

for utility installation would occur. A total of 24,250 cubic yards of soil would be excavated from the project site, 1,250 cubic yards of which would be kept on site and 23,000 cubic yards of which would be off-hauled. Project construction would occur over a 13-month period commencing in April 2020.

ENVIRONMENTAL SETTING

Characteristics of Sound

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units, such as inches or pounds, decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) are 10 times more intense than 1 dB, 20 dB are 100 times more intense, and 30 dB are 1,000 times more intense. Thirty dB represents 1,000 times as much acoustic energy as one decibel. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source, noise in a relatively flat environment with absorptive vegetation, decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally exchangeable. The City uses the CNEL noise scale for long-term noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying less developed areas.

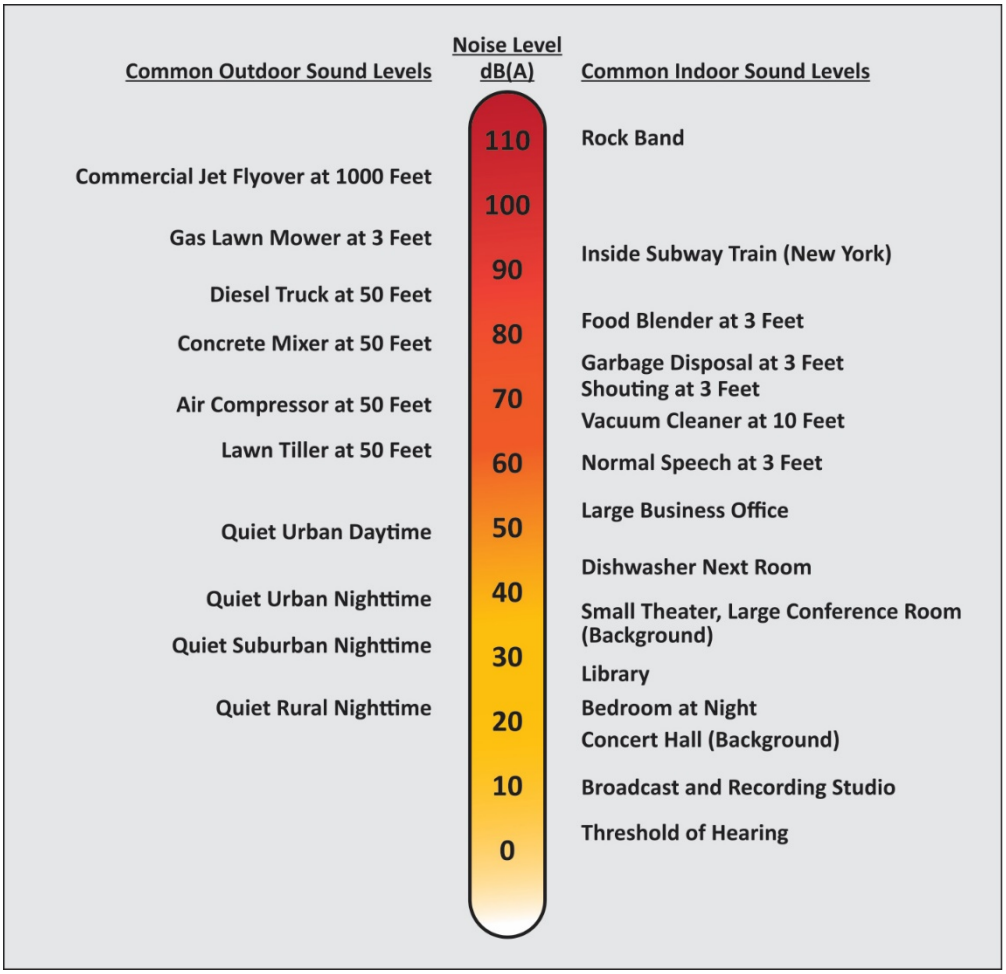
Table 1 lists definitions of acoustical terms, and Table 2 shows common sound levels and their sources.

Table 1: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit level that denotes the ratio between two quantities proportional to power, the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the 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. All sound levels in this assessment are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: Harris, Cyril M. *Handbook of Acoustical Measurements and Noise Control* (1991).

Table 2: Common Sound Levels and Noise Sources



Source: LSA, Associates, Inc., 2016.

Regulatory Framework

The federal, State, and local framework for noise standards is outlined below. The City of Cupertino has established standards in the General Plan and in the Municipal Code for land use projects that could potentially expose sensitive receptors to excessive noise levels.

U.S. Environmental Protection Agency

In 1972 Congress enacted the Noise Control Act. This act authorized the U.S. Environmental Protection Agency (U.S. EPA) to publish descriptive data on the effects of noise and establish levels of sound *requisite to protect the public welfare with an adequate margin of safety.* These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in Table 3. The U.S. EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The U.S. EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Table 3: Summary of USEPA Noise Levels

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (March 1974).

The noise effects associated with an outdoor L_{dn} of 55 dBA are summarized in Table 4. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

Table 4: Summary of Human Effects in Areas Exposed to 55 dBA L_{dn}

Type of Effect	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety.
Speech – Outdoors	100 percent sentence intelligibility (average) at 0.35 meter. 99 percent sentence intelligibility (average) at 1.0 meter. 95 percent sentence intelligibility (average) at 3.5 meters.
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below "vigorous action."
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Towards Area	Noise essentially the least important of various factors.

Source: U.S. Environmental Protection Agency. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (March 1974).

State of California

The State has established land use compatibility guidelines for determining acceptable noise levels for specified land uses. The City has adopted and modified the State's land use compatibility guidelines, as discussed below.

Local Regulations

City of Cupertino General Plan. The Health and Safety Element of the City's General Plan[1] seeks to ensure that the community continues to enjoy a high quality of life through reduced noise pollution, effective project design, and noise management operations. Applicable Health and Safety Element policies include the following:

- 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-1 in Appendix D of the General Plan) 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.

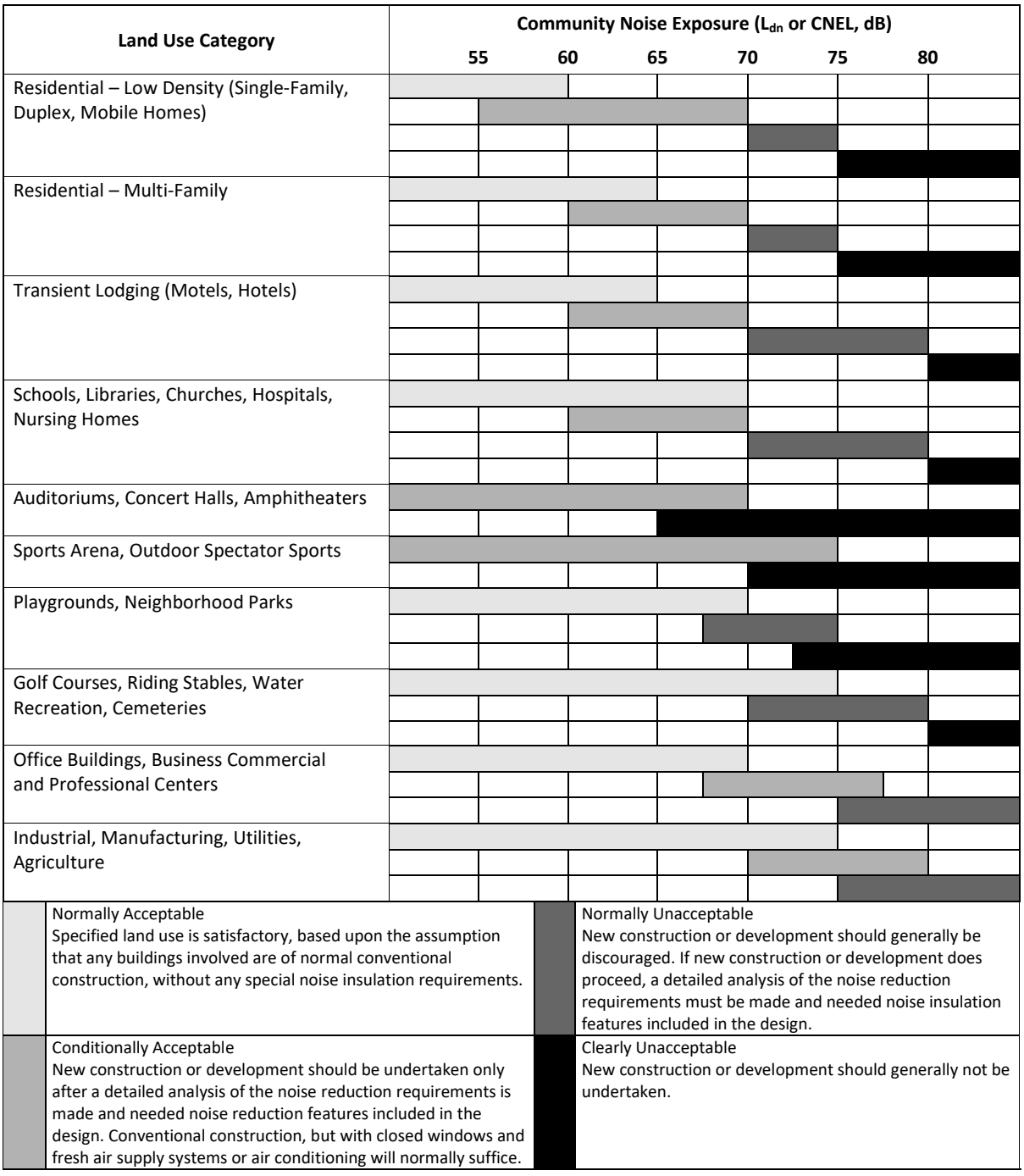
    - Strategy HS-8.2.2: Noise Control Techniques. Require analysis and implementation of techniques to control the effects of noise from industrial equipment and processes for projects near low-intensity residential uses.

    - 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.

- 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.

[1] Cupertino, City of, 2015. *Cupertino General Plan 2015-2040*. October 20.

Table 5: Land Use Compatibility for Community Noise Environments



Source: Cupertino, City of, 2015. *Cupertino General Plan 2015-2040.* Figure HS-8. October 20.

City of Cupertino Municipal Code. The City of Cupertino further addresses noise in the Municipal Code in Chapter 10.48, Community Noise Control. Section 10.48.040 establishes the acceptable daytime and nighttime maximum noise levels at receiving land uses. As shown in Table 6 below, the maximum permissible noise level (as measured at receiving sensitive land uses) that may be generated by sources on a nonresidential land use is 55 dBA during nighttime hours and 65 dBA during daytime hours. The maximum permissible noise level that may be generated by sources on a residential land use is 50 dBA during nighttime hours and 60 dBA during daytime hours. Daytime hours are defined to be the period from 7:00 a.m. to 8:00 p.m. on weekdays, and from 9:00 a.m. to 6:00 p.m. on weekends.

Table 6: City of Cupertino 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, 2018.

In addition, 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 20 dBA in a 2-hour period. Table 7 shows example combinations of allowable noise level exceedances.

Table 7: City of Cupertino Example 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, 2018.

According to Section 10.48.051 of the Municipal Code, the use of motorized equipment for landscape maintenance activities is limited to the hours of 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 for the proposed project. 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.

According to Section 10.48.053 of the Municipal Code, noise from grading, construction, and demolition activities is also allowed to exceed the maximum permissible noise limits described above (with examples given in Table 7), 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 L_{max} as measured at a distance of 25 feet; or
- The operation of such equipment does not produce noise levels that exceed 80 dBA L_{max} 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 (which include New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). 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.

Existing Noise Environment

The ambient noise environment in the City of Cupertino is affected by a variety of noise sources, including auto traffic on arterial streets and I-280. As indicated in the Noise Element of the General Plan, noise produced by industrial facilities has an insignificant effect on the City's noise environment. The following section describes the existing noise environment and identifies the primary noise sources in the vicinity of the project site.

Existing Ambient Monitored Noise Levels

To assess existing noise levels, LSA conducted noise monitoring to establish the existing ambient noise environment at the project site. Three short-term (15-minute) and one long-term (24-hour) noise measurements were conducted at the project site from Friday, January 25, 2019 to Tuesday, January 29, 2019. Noise measurement data collected during the noise monitoring are summarized in Table 8. As shown in Table 8, the short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 56.5 dBA to 62.6 dBA L_{eq}. The long-term measurement resulted in a daily noise level of 69.2 dBA CNEL. Vehicle traffic on I-280 was reported as the primary noise source. The meteorological data conditions at the time of the noise monitoring are shown in Table 9. Noise measurement sheets are provided in Attachment A.

Table 8: Ambient Noise Monitoring Results, dBA

Location Number	Location Description	Date, Start Time	L_{eq}/CNEL[a]	L_{max} [b]	L_{min} [c]	Primary Noise Sources
ST-1	Near rear entrance to 20705 Valley Green Drive	1/25/19, 5:11 p.m.	59.1	64.4	56.5	I-280 traffic
ST-2	Property line of Villages at Cupertino Apartment Homes	1/25/19, 5:30 p.m.	56.5	64.1	52.5	I-280 traffic
ST-3	Rooftop of attendant unit	1/29/19, 2:20 p.m.	62.6	66.1	59.3	I-280 traffic
LT-1	Western boundary of project site near adjacent residences	1/25/19, 4:55 p.m.	69.3/ 69.2	84.4	61.5	I-280 traffic

Source: LSA (January 2019).

[a] L_{eq} represents the average of the sound energy occurring over the measurement time period for the short-term noise measurements. CNEL is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of five decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.

[b] L_{max} is the highest sound level measured during the measurement time period.

[c] L_{min} is the lowest sound level measured during the measurement time period.

Table 9: Meteorological Conditions During Ambient Noise Monitoring

Location Number	Average Wind Speed (mph)	Maximum Wind Speed (mph)	Temperature (˚F)	Humidity (%)
ST-1	0.0	1.0	55.4	63
ST-2	0.0	0.8	54.5	65
ST-3	0.0	1.0	54.0	62

Source: LSA (January 2019).

Existing Sensitive Land Uses

Certain land uses are considered more sensitive to noise than others. Examples of these land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest sensitive receptors to the project site include the multi-family residences located adjacent to the western border of the project site and the multi-family residences located approximately 75 feet east of the eastern border of the project site.

THRESHOLDS OF SIGNIFICANCE

The State CEQA Guidelines indicate that a project would have a significant impact on noise if it would result in:

- 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 applicable standards of other agencies;

- Generation of excessive groundborne vibration or groundborne noise levels; or

- 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 two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

IMPACTS AND MITIGATION MEASURES

The following section discusses the potential noise and vibration impacts associated with implementation of the proposed project.

Generation of Substantial Increase in Ambient Noise Levels

The following section describes how the short-term construction and long-term operational noise impacts of the proposed project would be less than significant.

Short-Term (Construction) Noise Impacts

As described above, noise from grading, construction, and demolition activities may exceed the maximum permissible noise limits (shown in Table 6), 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 L_{max} as measured at a distance of 25 feet; or

- The operation of such equipment does not produce noise levels that exceed 80 dBA L_{max} as measured at any nearby property.

In addition, construction noise is permitted by the City of Cupertino when activities occur between daytime hours on weekdays (daytime hours are defined to be the period from 7:00 a.m. to 8:00 p.m. on weekdays). Construction noise is prohibited on Saturdays, Sundays, and holidays when construction activities occur within 750 feet of a residential area. In addition, construction noise is prohibited during nighttime periods unless it meets the nighttime standards shown in Table 6.

Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts would generally be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table 10 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be

higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 10, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during grading and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 10 lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

Table 10: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

As discussed above, the proposed project must implement best management noise reduction practices, including, but not limited to, meeting at least one of the following criteria: no individual device produces a noise level of more than 87 dBA L_{max} as measured at a distance of 25 feet; or the operation of such equipment does not produce noise levels that exceed 80 dBA L_{max} as measured at any nearby property.

As shown in Table 10, typical maximum noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. At a distance of only 25 feet from the operating equipment, noise levels would be approximately 6 dBA higher than those listed in the table. Therefore, typical maximum noise levels generated by almost all of the types of heavy construction equipment listed in the table would exceed 87 dBA L_{max} at 25 feet from the operating equipment. Therefore, this analysis focuses on whether noise from multiple pieces of heavy construction equipment operating simultaneously near the project borders would result in noise levels in excess of the City's standard of 80 dBA L_{max} as measured at nearby receiving properties.

As noted above, the closest sensitive receptors to the project site include the multi-family residences located immediately west of the project site and the multi-family residences located approximately 75 feet east of the eastern border of the project site. Due to proposed building setbacks and the proposed bio-retention basin, the residences that would be closest to major building construction activities would be the multi-family residences immediately west of the project site. The property lines of these sensitive receptors are located immediately adjacent to the project site; however, the area adjacent to the project site includes a parking lot and carports. The nearest residential buildings are located approximately 125 feet west of the project site. At 125 feet, there would be a decrease of approximately 8 dBA from the increased distance compared to the noise level measured at 50 feet from the active construction area. Therefore, the closest sensitive receptor may be subject to short-term maximum construction noise reaching 79 dBA L_{max} during construction. Therefore, construction noise levels as measured at the nearest façade of noise sensitive land uses would below the City's threshold of 80 dBA L_{max}. In addition, construction equipment would operate at various locations within the 3-acre project site and would only generate this maximum noise level when operations occur closest to the receptor.

As discussed above, construction noise may exceed the maximum permissible noise limits, provided that the equipment utilized is outfitted with high-quality mufflers and abatement devices and is in good condition. Consistent with the Municipal Code, the following construction best management practices will be implemented:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.

- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.

- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.

- Ensure that all general construction related activities are restricted to between the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday. Construction shall be prohibited on Saturdays, Sundays, and holidays, and during the nighttime period.

Long-Term Noise Impacts

The proposed project would include the demolition of existing self-storage buildings and would construct two new four-story self-storage buildings in a developed area of the City. Operational noise can be categorized as mobile source noise and stationary source noise. Mobile source noise would be attributable to the additional trips that would occur with implementation of the proposed project. Stationary source noise includes noise generated by the proposed project, such as storage loading/unloading activities and heating, ventilation, and air conditioning (HVAC) equipment.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity. A characteristic of sound is that a doubling of a noise source is required in order to result in a perceptible (3 dBA or greater) increase in the resulting noise level.

Based on the Trip Generation Memorandum[2] prepared for the proposed project, the proposed project would generate a maximum of approximately 316 net new average daily trips, with approximately 22 trips occurring in the AM peak hour and approximately 36 trips occurring in the PM peak hour. The adjacent I-280, which is the predominant noise source in the vicinity of the project site, carries approximately 146,000 average daily trips.[3] Project trips would represent a small increase in noise level, approximately 0.01 dBA CNEL based on the following equation:

$$Change\ in\ (dBA) = 10 * \log_{10}\left(\frac{Current\ Volume}{\text{Future Volume}}\right)$$

Therefore, project daily trips would not result in a perceptible noise increase along any roadway segment in the project vicinity.

Stationary Source Noise Impacts. As described in the regulatory framework discussion above, the City of Cupertino has established maximum permissible noise levels that may be generated by a nonresidential land use. These maximum levels are 55 dBA during nighttime hours and 65 dBA during daytime hours, as measured at a receiving sensitive land use. (Daytime hours are defined to be the period from 7:00 a.m. to 8:00 p.m. on weekdays, and from 9:00 a.m. to 6:00 p.m. on weekends.) The maximum permissible noise level that may be generated by a residential land use is 50 dBA during nighttime hours and 60 dBA during daytime hours.

The proposed public storage uses would contain stationary noise sources such as storage loading/unloading activities and HVAC equipment. These are potential point sources of noise that could affect noise-sensitive receptors in the project site vicinity.

Customer Vehicle Access Activities. The proposed project would contain self-storage uses, therefore, vehicle noise, including engine sounds, car doors slamming, car alarms, music, and people conversing, could occur as a result of the proposed project. Typical vehicle access activities, such as people conversing or doors slamming, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet.

As noted above, the closest sensitive receptors to the project site include the multi-family residences located immediately west of the project site and the multi-family residences located approximately 75 feet east of the eastern border of the project site. The closest guest parking

---

2 LSA, 2019. *Trip Generation Memorandum for the Proposed Public Storage Facility Project at 20565 Valley Green Drive, Cupertino, California*. January 25.

3 Caltrans, 2017. *2017 Traffic Volumes.* Website: http://www.dot.ca.gov/trafficops/census/ (accessed January 2019).

spaces to the nearby sensitive receptors are located near the eastern wall of the proposed Building 1,which would be located approximately 210 feet west of the nearest residential buildings.

At 210 feet, there would be a decrease in noise of approximately 13 dBA due to the increased distance from the baseline noise levels of 60 dBA to 70 dBA L_{max}. The parking spaces would be shielded by a 6-foot concrete masonry unit (CMU) wall, which would provide an additional 5 dBA decrease in noise. Therefore, the closest sensitive receptor may be subject to parking lot activity noise reaching 42 dBA to 52 dBA L_{max}. This noise level would not exceed the City's maximum noise level standards of 55 dBA during nighttime hours and 65 dBA during daytime hours, as measured at the nearest receiving sensitive land use.

HVAC Equipment. HVAC equipment could be a primary noise source associated with the proposed project as the project would be a climate-controlled facility. HVAC equipment is often mounted on rooftops, located on the ground, or located within mechanical rooms. The noise sources could take the form of fans, pumps, air compressors, chillers, or cooling towers. HVAC operations would be required to meet all noise standards.

Precise details of HVAC equipment, including future location and sizing, are unknown at this time; therefore, for purposes of this analysis, 75 dBA at 3 feet was assumed to represent HVAC-related noise.[4] The nearest sensitive receptors to proposed buildings include the multi-family residences located adjacent to the western border of the project site, which would be located approximately 200 feet west of Building 2. Adjusted for distance to the nearest off-site sensitive receptors, these residences would be exposed to a noise level of 39 dBA L_{max} generated by HVAC equipment. This noise level would not exceed the City's maximum noise level standards of 55 dBA during nighttime hours and 65 dBA during daytime hours, as measured at the nearest receiving sensitive land use.

Generation of Excessive Groundborne Vibration

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of buildings built prior to the 1950s or buildings of historic significance,

[4] Trane, 2002. *Sound Data and Application Guide for the New and Quieter Air-Cooled Series R Chiller*.

potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is therefore assumed that no such vehicular vibration impacts would occur and no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate groundborne vibration.

Construction Vibration

Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table 11 shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 11, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment guidelines. At this level, groundborne vibration would result in potential annoyance to residents and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$L_v dB(D) = L_v dB(25\ ft) - 30 \log (D/25)$$
$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

Table 11: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L_V (VdB)[a]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2006).
[a] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
µin/sec = micro-inches per second
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

Table 12 lists the projected vibration level from various construction equipment expected to be used on the project site to the nearest buildings in the project vicinity. For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. The closest buildings to the project site include the multi-family residences located approximately 125 feet west of the project site, the multi-family residences located approximately 75 feet east of the project site, and the commercial buildings located approximately 125 feet south of the project site.

Table 12: Summary of Construction Equipment and Activity Vibration

Land Use	Direction	Equipment/Activity	Reference Vibration Level (VdB) at 25 feet	Reference Vibration Level (PPV) at 25 feet	Distance (feet)	Maximum Vibration Level (VdB)	Maximum Vibration Level (PPV)
Multi-Family Residential	West	Large Bulldozers	87	0.089	125	66	0.008
		Loaded Trucks	86	0.076	125	65	0.007
Multi-Family Residential	East	Large Bulldozers	87	0.089	75	73	0.017
		Loaded Trucks	86	0.076	75	72	0.015
Commercial	South	Large Bulldozers	87	0.089	125	66	0.008
		Loaded Trucks	86	0.076	125	65	0.007

Source: Compiled by LSA (January 2019).
Note: The FTA-recommended building damage threshold is 0.2 PPV (in/sec) or approximately 94 VdB at the receiving property structure or building.
FTA = Federal Transit Administration
in/sec = inch(es) per second
PPV = peak particle velocity
VdB = vibration velocity decibel(s)

As shown in Table 12, the multi-family residences located east of the project site would experience vibration levels of up to 73 VdB (0.017 PPV [in/sec]), the multi-family residences located west of the project site would experience vibration levels of up to 63 VdB (0.008 PPV [in/sec]), and the commercial buildings to the south would experience vibration levels of up to 66 VdB (0.008 PPV [in/sec]). These vibration levels at the nearest buildings from construction equipment would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. Although construction vibration levels at the nearest buildings would have the potential to result in annoyance, these vibration levels would no longer occur once construction of the project is completed. Therefore, groundborne vibration impacts from construction activities associated with the proposed project would not be considered significant.

Aircraft Noise Impacts

The proposed project is not located within 2 miles of a public or public use airport. The San Jose International Airport is the closest airport and is located approximately 5.7 miles northeast of the project site. Aircraft noise is occasionally audible at the project site; however, no portion of the project site lies within the 65 dBA CNEL noise contours of any public airport nor does any portion of the project site lie within 2 miles of any private airfield or heliport. Therefore, the proposed project would not result in the exposure of people residing or working in the project area to excessive noise levels associated with the proximity of an airport.

Land Use Compatibility

The proposed project would include a manager's apartment in the northwest corner of Building 2. The City sets forth noise level standards for land use compatibility and interior noise exposure of new development. According to the City's General Plan, noise levels below 60 dBA CNEL are considered satisfactory for residential land uses and do not require special insulation requirements. Noise levels between 55 and 70 dBA CNEL require an analysis of noise reduction requirements and noise insulation as needed. For areas with noise levels between 70 dBA CNEL and 80 dBA CNEL, residential land use 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. In addition, for areas with noise levels over 70 dBA CNEL, residential land use development should not be undertaken. The interior noise level standard for residential land uses is 45 dBA CNEL.

In addition, according to the City's General Plan, noise levels below 75 dBA CNEL are considered satisfactory for industrial land uses and do not require special insulation requirements. Noise levels between 70 and 75 dBA CNEL require an analysis of noise reduction requirements and noise insulation as needed. For areas with noise levels over 75 dBA CNEL, industrial land use development should generally be discouraged.

The noise environment at the project site is dominated by vehicle traffic noise from I-280. Based on the long-term noise monitoring, noise levels on the project site are approximately 69.2 dBA CNEL. Based on the City's noise and land use compatibility standards, this noise level is considered conditionally acceptable for residential land uses and normally acceptable for industrial

development. According to the City, new residential construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Therefore, the land use may be permitted only after detailed analysis of the noise reduction features proposed to be incorporated in the building design. A preliminary interior and exterior noise analysis for the proposed manager's apartment is provided below.

Interior Noise Analysis

Based on the USEPA's Protective Noise Levels,[5] with a combination of walls, doors, and windows, standard construction for Northern California buildings (STC-24 to STC-28) would provide more than 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the manager's apartment would not meet the City's interior noise standard of 45 dBA CNEL (i.e., 69.2 dBA – 15.0 dBA = 54.2 dBA) for residential land uses. Therefore, an alternate form of ventilation, such as an air-conditioning system, would be required to ensure that windows can remain closed for a prolonged period of time. The proposed project would include an HVAC system, which would allow windows in the manager's apartment to remain closed and would meet the City's interior noise level criterion of 45 dBA CNEL (i.e., 69.2 dBA – 25.0 dBA = 44.2 dBA). Therefore, the proposed project would meet the City's interior noise standard of 45 dBA CNEL.

Exterior Noise Analysis

As identified above, noise levels on the project site are approximately 69.2 dBA CNEL. Based on the City's noise and land use compatibility standards, this noise level is within the City's conditionally acceptable noise level of 60 to 70 dBA CNEL for residential land uses and within the City's normally acceptable noise level of below 75 dBA CNEL for industrial land uses. According to the City, new residential construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. The existing on-site noise level would meet the City's exterior noise level standards for residential land uses if noise reduction requirements and noise insulation features are included in the design to meet the interior noise standard. As discussed above, the proposed project would include an HVAC system, which would allow windows in the manager's apartment to remain closed and would meet the City's interior noise level criterion of 45 dBA CNEL. Since interior noise levels would meet City standards, the proposed project would meet the City's exterior land use compatibility standards for residential land uses. Therefore, the proposed project would meet the City's exterior land use compatibility standards for both residential and industrial land uses.

CONCLUSION

Based on the analysis presented above, construction noise levels associated with the proposed project would not result in the generation of noise levels that would exceed the City's threshold. In addition, traffic-related noise impacts would not be significant. As discussed above, long-term operation of the proposed project would also not create a significant increase in stationary source

[5] U.S. Environmental Protection Agency, 1978. *Protective Noise Levels, Condensed Version of EPA Levels Document*. November.

noise, including noise associated with customer vehicle activities and HVAC equipment. Results of the construction vibration analysis conclude that during construction of the proposed project, vibration levels at the closest structures from construction equipment would not exceed the FTA threshold. Additionally, once constructed, the proposed project would not contain uses that would generate groundborne vibration. The proposed project would also not result in the exposure of people residing or working in the project area to excessive noise levels.

In addition, as described in the analysis above, the City sets forth noise level standards for land use compatibility and interior noise exposure of new development. As identified above, noise levels on the project site would be up to 69.2 dBA CNEL. Based on the City's noise and land use compatibility standards, this noise level would be within the City's normally acceptable noise level standards for industrial land uses. For residential land uses, special noise insulation should be provided. As discussed above, the proposed project would include an HVAC system, which would allow windows in the manager's apartment to remain closed and would meet the City's interior noise level criterion of 45 dBA CNEL. Therefore, since interior noise levels would meet City standards, the proposed project would meet the City's exterior land use compatibility standards.

Attachment A: Noise Measurement Survey Sheets

ATTACHMENT A

NOISE MEASRUREMENT SURVEY SHEETS

Noise Measurement Survey

Project Number: COC1803
Project Name: Public Storage- Cupertino

Test Personnel: Chet Monh
Equipment: LD SoundTrack LXT0004025

Site Number: 01 Date: January 25, 2019

Time: From 5:11pm To 5:27pm

Site Location: Near rear entrance to 20705 Valley Green Drive

Primary Noise Sources: I-280 traffic
Comments: There is a lounging area with tables and chairs outside toward building entrance

Adjacent Roadways: Parking lot activities

File:	COC1803_STNLM_S01.xlsx
L_{eq}	59.1
L_{max}	64.4
L_{min}	56.5
L_5	60.8
L_{10}	60.3
L_{33}	59.4
L_{50}	58.7
L_{66}	58.3
L_{90}	57.7

Atmospheric Conditions	
Average Wind Velocity (mph)	0
Maximum Wind Velocity (mph)	1
Temperature (F)	55.4
Relative Humidity (%)	63

Noise Measurement Survey

Project Number: COC1803
Project Name: Public Storage- Cupertino

Test Personnel: Chet Monh
Equipment: LD SoundTrack LXT0004025

Site Number: 02 Date: January 25, 2019 Time: From 5:30pm To 5:45pm

Site Location: Property line of Villages at Cupertino Apartment Homes

Primary Noise Sources: I-280 traffic
Comments: Parking lot ingress/egress activities

Adjacent Roadways: Beardon Drive

File:	COC1803_STNLM_S02.xlsx
L_{eq}	56.5
L_{max}	64.1
L_{min}	52.5
L_5	58.5
L_{10}	57.9
L_{33}	56.8
L_{50}	56.2
L_{66}	55.8
L_{90}	54.6

Atmospheric Conditions	
Average Wind Velocity (mph)	0
Maximum Wind Velocity (mph)	0.8
Temperature (F)	54.5
Relative Humidity (%)	65

Noise Measurement Survey

Project Number: COC1803
Project Name: Public Storage- Cupertino

Test Personnel: Chet Monh
Equipment: LD SoundTrack LXT0004025

Site Number: 03 Date: January 29, 2019

Time: From 2:20pm To 2:35pm

Site Location: Rooftop of attendance residence unit

Primary Noise Sources: I-280 traffic
Comments: To supplement long-term measurement for residence area

Adjacent Roadways: Storage facility ingress/egress

File:	COC1803_STNLM_S03.xlsx
L_{eq}	62.6
L_{max}	66.1
L_{min}	59.3
L_5	64.3
L_{10}	63.8
L_{33}	62.8
L_{50}	62.5
L_{60}	62.1
L_{90}	61.3

Atmospheric Conditions	
Average Wind Velocity (mph)	0
Maximum Wind Velocity (mph)	1
Temperature (F)	54.0
Relative Humidity (%)	62

Location Photo:

1-25-19

Hourly Leq	Edit			Hourly Leq	Weighting	
69.3		16	4:00 PM	69.3		8550224.137
		17	5:00 PM	59.7		929046.2842
	1	18	6:00 PM	63.1		2062983.322
		19	7:00 PM	63.4	5.0	6920313.905
		20	8:00 PM	62.4	5.0	5495202.714
		21	9:00 PM	63.4	5.0	6905253.122
		22	10:00 PM	63.6	10.0	22774792.45
		23	11:00 PM	60.9	10.0	12259786.23
		0	12:00 AM	59.5	10.0	8820878.316
		1	1:00 AM	56.6	10.0	4578797.816
		2	2:00 AM	57.6	10.0	5748913.998
		3	3:00 AM	60.0	10.0	9946329.138
		4	4:00 AM	63.2	10.0	20742881.04
		5	5:00 AM	65.0	10.0	31825470.19
		6	6:00 AM	66.0	10.0	39892187.4
		7	7:00 AM	63.2		2109705.211
		8	8:00 AM	59.6		911786.2972
		9	9:00 AM	59.9		974514.7189
		10	10:00 AM	59.6		917349.425
		11	11:00 AM	61.3		1342200.395
		12	12:00 PM	60.3		1062568.935
		13	1:00 PM	60.4		1103468.756
		14	2:00 PM	60.3		1061636.605
		15	3:00 PM	60.3		1066164.456
				CNEL		69.2
				Peak Leq		69.3

Daytime	
Min	59.5
Max	69.3
Evening	
Min	56.6
Max	60.0
Night	
Min	59.6
Max	66.0
MIN	51.60
MAX	84.4