

CITY OF CUPERTINO
RENOVATION OF CITY HALL ANNEX

10455 TORRE AVE CUPERTINO CA

TASK TWO - PROGRAMMING REPORT

TASK THREE - CODE RESEARCH & ANALYSIS

DRAFT

SEPTEMBER 22,2022

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A. INTRODUCTION

I. Introduction

Cupertino City Hall Annex resides at 10455 Torre Avenue at the corner of Torre Avenue and Pacifica Drive. The existing City Hall will undergo a full remodel and the Annex is to serve as interim City Hall Permit Center.

The building, built in 1977, is a single story, 4,900 square foot*, mission-style wood framed structure with cement plaster exterior. The building stands alone on a 21,360 square foot* site, which includes non-code compliant parking on the north and west sides of the building. The south of the building is currently covered by water-dependent landscaping. The east side of the building is composed of both water-dependent landscaping and concrete steps leading to the building's main entrance.

Minor modifications happened in 1986, in which the second floor record storage room was added. Several walls were added below creating additional offices. No other visible changes have occurred to the building's exterior or interior since then. The building is currently used by multiple tenants as a professional service space.

II. Project Schedule

Substantial completion of the Project is currently scheduled for May 2024.

III. Project Budget

We understand the Project Budget is currently \$3 million, of which \$1.9 million targeted construction budget is available, including furniture.

** Square footages have been obtained from existing documents the City provided.*

Cupertino's distinctive persona centers around being a desirable and progressive hometown for people and businesses in Silicon Valley. Global stature as a center of tech innovation artfully blends with local stature as a comfortable residential haven. Balancing these attributes takes ingenuity, partnership and engagement by the City of Cupertino government. Ingenuity in meeting essential needs while keeping local government small in size and budget. Partnership with other government service agencies and with the businesses that fuel the local economy. Engagement with residents to make government accessible and responsive. A commitment to openness and accessibility helps to keep the City's elected officials and staff aligned with the values and priorities of the community.

B. PROJECT ASSESSMENT & PROCESS

I. Assessment

The Interior of the Annex remains in its original state for the most part. Private offices occur throughout the building giving no opportunity for an open work environment. To meet City Hall's needs to the maximum extent possible, the building must undergo a complete interior renovation. The existing perimeter windows are non-code compliant single pane windows. The existing restrooms and doors do not meet accessibility requirements. There are no exit signs, and the interior lighting is outdated as it does not appear to have been replaced since the building's original construction. The building's HVAC system is inadequate and appears to be deteriorating.

The Exterior of the building does not provide an accessible path of travel, nor accessible parking spaces, nor an accessible entrance. The existing water-dependent landscaping must also be replaced with water-wise and California reflective plantings.

II. Process

The following Program has been assembled based on data gathered from the following methods:

- A. Existing as-built drawings review (see below for complete list)
- B. Meetings initiated by the Architect with Cupertino's Project Manager, Susan Michael, and internal review team, which include Ayano Hattori, Albert Salvador, Matt Morley, Sean Hatch, Astrid Robles, and Piu Ghosh.
- C. The client-provided Programming Criteria Document was also reviewed and evaluated for pertinent space planning information.
- D. Visits to the Project site by the Project team were made to observe and gather programmatic data.

III. Available Documents

- A. Topographic Survey dated 05.23.2022
- B. As-Built Drawings dated 1977 (presumed to be original drawings)
- C. As-Built Drawings dated 1986 (Minor modification to 1977 Drawings)
- D. Inspection Report and Due diligence Report dated 03.19.2021
- E. Asbestos and Lead Survey Report dated 02.25.2022 (RFQ Appendix G)
- F. City Standards available online at Cupertino.org

C. PROJECT FUNCTION

I. Introduction

The following function was defined based on data gathered from the following methods: client provided programming report, meeting with client's internal review team, program meetings with the client and uses, equipment take-offs, and subsequent site investigations. The goals stated in the function below were identified during the Programming session that took place on August 3, 2022.

II. Mission

City Hall provides various services to the City of Cupertino. For those services to continue uninterrupted while the City Hall building undergoes renovation, it is vital to accommodate the public-facing business services within the limited space of the City Hall Annex site and building.

III. Primary Function

Provide an open plan layout that encourages efficient and effective use of the facility while fostering intra and interdepartmental collaboration amongst Permit Center staff. The facility must also provide flexible and open space to allow for alternate uses in the long term. The facility should be energy efficient, well-lit, seismically safe, accessible, and workable. The facility should also accommodate the needs of the Emergency Operations Center in case of an emergency event.

IV. Green Building Features

Current CALGreen requirements generally equate to an approximate LEED Silver rating. Items such as sustainable design and building practices, water conservation measures, good health and well-being, indoor air quality, clean water and sanitation, and flexibility for change will be taken into consideration in the design process of the Annex. A draft LEED scorecard will be generated to review strategies which may be implemented.

V. Daylight and Acoustics

Provide a well-lit facility that takes advantage of daylighting techniques to improve visual quality and reduce electrical use. Provide appropriate acoustics design for a quiet, productive space.

VI. Aesthetics/Look

The building grounds are to be accessible, attractive, and welcoming. From the exterior, the building's prominent location should be used as an opportunity to create a statement of the values and identity of Cupertino City Hall. The interior should be pleasant, warm, light and airy. Like the exterior, the interior should be an expression of Cupertino City Hall values in its organization, use of materials, craftsmanship, and construction quality.

VII. Connection to Nature/Outdoors

Opportunities should be provided for the enjoyment of the outdoors, and pleasant climate during City Hall Annex use.

VIII. Accessibility Requirements

Provide accessible path of travel from the parking lot and from the sidewalks to the building entry without unnecessary conflict with cars. Ensure that all facilities are equally accessible to all portions and staff regardless of abilities.

All design elements shall be in compliance with the California Code of Regulations Title 24, Part 2, Chapter 11B and 2010 ADA Standards for Accessible Design. In addition, accessible features shall promote the concept of Universal Access (i.e. sloped walkways for everyone vs. defined accessible ramp and stairs).

D. TECHNICAL CRITERIA

I. Landscape Narrative

A. Universal Access

The following accessibility considerations will be evaluated and addressed (see also Architectural Narrative section):

- Pedestrian Access – safe and direct path to the entrance, that is visible and can be identified as the City Hall.
- Exterior Approach and Entrance – exterior ramps and stairs with sufficient space for multiple people, well-illuminated, barrier-free, and welcoming.

B. Code & Standards Analysis

- 2015 California Model Water Efficient Landscape Ordinance (MWELO)
- California Regional Water Quality Control Board, Municipal Regional Permits (MRP), section C.3
- Cupertino Municipal Code
- Cupertino Landscaping Ordinance: Cupertino Municipal Code, Chapter 14.15
- Cupertino irrigation specification standards
- see section E. Code Research & Analysis for additional applicable Codes & Standards

C. Design Criteria

Local Climate Conditions

City: Cupertino, California
Latitude: 37.3 degrees
Longitude: -122.0 degrees
Elevation: 240 feet

Sunset Climate Zone: 15, Chilly Winters and Thermal Belts along the Coast Range. This zone is influenced by marine air about 85 percent of the time and by inland air 15 percent of the time. Zone 15 gets winter chill as it lies in cold-air basins and on exposed hills. Zone 15 gets more heat than coastal Zone 17 and experiences a nagging afternoon wind.

D. Main Entry (East Entry) and Portico

The east entry will act as the main and public entry for the new City Hall Annex and will lead to the main public-facing building function, the Permit Counter. It is the largest, most attractive entry, which faces a street, and is the most appropriate entry for a public and civic function.

The Entry Portico can provide enough space for a comfortable exterior transition zone, possibly a small gathering space with bench seating.

The space planning will need to allow for pathway grading and will need to assess the value of retaining the existing live oak tree. It may not be possible to create an accessible route to the parking area with the existing pathway alignment; in order to bring the existing entry landing and parking into compliance, the ramp must become much steeper. Entry stairs will be rebuilt, due to the changes to the Entry Portico and landing, possibly widened in parts. The existing sidewalk appears to be sufficiently flat to act as a compliant lower stair landing. Areas flanking either side of the base of the stairs are an optional opportunity for benches or informal seating for waiting visitors.

New plantings will accompany the new entry. The oak tree may need to be removed to allow a new ramp to the parking. Planting, including trees, could be selected to accentuate the entry façade, by selecting for symmetry, height, transparency, and character, as needed. A new building sign should be visible to drivers on both Torre Avenue and on Pacifica Drive, optionally in the same location as the existing sign. Signage design may wish to follow the signage guidelines for other Civic Center buildings.

E. Deck & Garbage Enclosure Area

The employee kitchenette will open onto a new flush deck for outdoor lunch use. Existing mature deciduous pear trees here could provide seasonal dappled shade and seasonal color. A third mature tree here is a conifer (either a juniper or cypress). Consideration can be given to selective pruning or tree removal, to provide a more appropriate tree canopy for outdoor dining. Health of all trees will be reviewed. Awkward tree locations will also be reviewed. Low plantings could screen the parking and trash enclosure and provide color.

Deck furnishings would be movable and could be secured with cables or by storing inside. The dining area should be fenced off from the parking area, to define it as a space for the office employees, and not for the general public. Some or all of the fences may be screened by low planting or by vines. The deck will be flush with the building finish floor elevation, but will be about 18-inches above grade. Any edge of the deck not defined by a fence shall require a guard or railing.

City shall provide requirements for trash bin sizes and quantities, which will in turn determine the size of a new trash enclosure. The trash enclosure location and size will affect the design of the seating area. One or more faces of the enclosure could be screened with vine or shrub planting.

City shall provide requirements for bike storage security and capacity. Several bike storage opportunities are available. A new trash enclosure structure could include space for covered bike storage. An alternative or additional location is the current location of the irrigation controller, (west of the proposed restrooms or shower room). Covered bike storage is more secure but requires more space. Horizontal and vertical bike storage are options for either location.

Access to this space should be provided from both the kitchenette, and from the parking area.

The walkway in front of the existing trash enclosure gate may present a tripping hazard and may need to be replaced. Other walkways should be reviewed for code compliance. The adjacent parking stall may benefit from special markings to indicate weekly use for trash bins.

F. West Entry

The new trash enclosure should have the west face screened with shrub or vine planting, so as not to clash with the building façade.

A small unplanted island lies south of the parking stalls. The new plantings along the south edge can extend into this planter. A pistache, birch, or oak tree would match the existing tree species.

A small sign near the sidewalk at this location could direct pedestrians to the main entry.

G. North Edge and North Entry

The north edge of the building is set close to parking, without the benefit of much buffer space as a transition. The current walkways vary in width from 3.5-ft to nearly 5-ft. For parking lots with wheel stops, the code typically allows the owner to widen the sidewalk, so that the car bumper overhangs the sidewalk. This would still allow sufficient space for new planting.

The North Entry will not be a public entry, and thus will not need to be accessible. However, it will receive deliveries. A parking stall may need to be removed or given special markings to indicate that deliveries will pass through. Existing stalls are 9-ft wide. Stall widths could be adjusted to create a small aisle for dollies and handtrucks. A new curb cut or sloped concrete here could assist with deliveries. Entry stairway may benefit from a renovation with an inclined plane, also for dollies and handtrucks.

H. Site Storm Drainage

No significant changes are proposed to the existing site drainage strategy.

Although the City parcel extends to the center of each parking aisle, each parking aisle has a Private Driveway Easement, which would make it impractical to change the overall grading strategy of the drive aisles or parking stalls. Each drive aisle pitches to an area drain near the back of sidewalk.

Most of the exterior site is planting areas which provide little runoff during all but the largest storms.

The existing turf lawn is pitches up to 25% slope, which is too steep for riding mowers, and which can send runoff to the sidewalks. Replacing turf with shrub planting would reduce runoff. Additionally, site grades could be modified to prevent nearly all runoff from reaching the sidewalk.

In any location in which a site walk needs to be replaced, the grades will be studied to determine whether runoff can pitch towards planting areas instead of towards parking areas.

J. Stormwater Management

California Regional Water Quality Control Board, Municipal Regional Permits (MRP), section C.3 "New Development and Redevelopment" applies to projects that create and/or replace 5,000 SF or 10,000 SF or more of impervious surface (separate thresholds based on project type).

Additionally, where a project results in an alteration of 50 percent or more of the impervious surface of a previously existing development that was not subject to C.3 requirements, the entire project consisting of all existing, new, and/or replaced impervious surfaces must be included in the treatment system design.

Our project does not propose to alter or replace 5,000 square feet or more of impervious surface, nor to alter 50 percent or more of the impervious surface of a previously existing development that was not subject to C.3 requirements. We do not anticipate the project being subject to post-construction stormwater implementation. Opportunities for voluntary green infrastructure measures will be implemented where appropriate.

K. Planting Design

General. New plantings will be both water-wise and more reflective of the California landscape. The project is seen as an opportunity to build upon and extend recent drought-tolerant planting at City Hall, and as a demonstration of good civic planning and design.

South Building Face. Full of windows, including two 15-ft long windows, this face is an opportunity to remove existing dense hedge planting, to allow more light into the building and to allow the interior spaces to feel more open and connected to the exterior, while still providing sufficient privacy for building staff. Alignment of plant masses with windows could provide a clean, intentional look from the interior view and from the sidewalk view.

Trees. All healthy trees should be retained if possible, to provide some summer shade, especially to the south building face. One or more existing birch trees may need to be removed due to poor health. New deciduous trees can provide additional dappled shade, without blocking views out of windows or creating the impression of being overly enclosed.

Street Trees. Two street trees, Chinese Pistache, appear in good health towards the west end of the property. The original plans called for at least one more street tree. To add street trees is beyond the scope of this project, and would be outside of the property. However, a similar effect could be achieved with tree planting within the south lawn area, with one or more trees of the same species, spaced appropriately, providing similar benefits without the costs of demolition, sleeving, and irrigation coordination.

Climate-appropriate species. The south lawn is an opportunity to demonstrate the City's committed response to drought conditions and to the need to adapt to our local ecological setting. Ornamental grasses, succulents, and other climate-adaptive plants may be appropriate here.

Seating Area. A shaded location along the south edge, away from office windows, could provide an opportunity for a bench or informal seat for office workers to take personal phone calls outside.

L. Planting Irrigation

Applicable Codes and Standards:

- City of Cupertino irrigation specification standards and equipment standards for publicly-owned properties;
- 2015 California Model Water Efficient Landscape Ordinance (MWEL0);
- Cupertino Landscaping Ordinance: Cupertino Municipal Code, Chapter 14.15;
- California MWEL0 applies to all rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet, requiring a building or landscape permit, plan check, or design review. The City's local ordinance conforms to the State requirements, while maintaining a streamlined approval process.

Local Water Purveyor: San Jose Water Company (SJWC)

Irrigation Method: Combination of drip and bubblers. Drip tubing will be served by drip valve kits, (replacing existing irrigation circuit remote-control valves).

Water pressure: TBD

Existing planting area (approximately): 6800-6900 square feet.

Likely future planting area (based on program): 6000-6500 square feet.

Landscape water meter requirement threshold: 5,000 sq. ft. of planting / landscape.

Landscape water meters are defined as either a dedicated water service meter or private submeter.

It remains to be determined whether a landscape meter must be provided by the local water purveyor (SJWC); or whether it may be a privately-owned meter or submeter.

Water Type and Source: municipally supplied potable water connection (not recycled water or grey water systems).

Point of Connection: The existing point-of-connection, which serves both domestic water and landscape irrigation, will be renovated in order to provide separation and protection of the domestic drinking water.

Backflow Protection: The current backflow device, serving both building and landscape irrigation, is non-compliant. The building and landscape shall have separate backflow protections systems. A separate water meter for landscape irrigation may be required. A new backflow device will be required. The new water backflow may be protected from damage by a steel cage.

Controller: Per City's current standards, Rain Master Eagle Plus, or similar.

Much of the existing system will be replaced. The controller location will be determined by the larger project requirements, such as trash location, bike storage location, utility connections, and pedestrian circulation. New drip tubing will be served by new drip valve kits, replacing existing irrigation circuit remote-control valves.

The design team will work with the City Grounds team to assess existing lateral pipes for the size, material, and condition. Appropriate laterals will be retained. The City's Grounds staff indicated that some of the proposed irrigation upgrades may be performed by their staff before the City contracts with a general contractor. The design team will work closely with Grounds staff to determine the appropriate specifications before either party settles too firmly on a course of action.

II. Architectural Narrative

A. Introduction

The design and construction of Cupertino City Hall Annex shall meet the requirements outlined in the Program. The primary architectural objective is to allow for flexibility to the maximum extent possible. City Hall's community wishes to create an aspirational space that encourage teamwork, flexibility and supports the ever-changing needs of the modern office.

As the current building layout is inflexible to meet the community and staff's needs, the interior of the building will be completely demolished. The perimeter windows will be replaced with energy efficient windows compliant with Title 24 Energy requirements.

B. Design Criteria - see section E. Code Research & Analysis

C. Universal Access

As a City Hall, this space will provide diverse services to the community, thus accessibility will be a priority. No passenger elevator or lift will be provided as equal accommodations will be provided on the main floor level.

The following accessibility considerations will be evaluated and addressed:

- A. Pedestrian Access – safe and direct path to the entrance, that is visible and can be identified as the City Hall.
- B. Exterior Approach and Entrance – exterior ramps and stairs with sufficient space for multiple people, well illuminated, barrier free and welcoming.
- C. Interior Circulation – easily identifiable access path, minimizing circulation. Programs located in a manner to reduce unnecessary travel.
- D. Interior Services – logical arrangements of services, pleasant, efficient, and durable seating provided for those who are waiting.
- E. Sanitary Facilities – well designed and durable facilities including attention to public health considerations.
- F. Wayfinding – provide signage, clear path of travel, easy navigation.
- G. Workplace – Workplace layout and FF&E selection that consider flexibility and work quality. Acoustic management, daylighting/task lighting considerations, temperature and ventilation control, indoor air quality consideration through active and passive design strategies.
- H. Storage and Archival Needs – efficient storage for archival needs.
- I. Materials and Building Systems – selection in alignment with the project needs and sustainability values. Consider availability of ongoing maintenance resources and operational processes.

D. Building Summary*

Perimeter Concrete Foundation
Wood Framed Structure with Stucco exterior;
Sloped Clay Tile Roof
Single-glazed windows
No Fire Sprinklers but building equipped with fire alarm system
Power consists of 600amp 120/208 volt, single meter
HVAC system consists of Forced Air Units
No accessible entrance
No accessible parking

* *per client provided Inspection Report dated 3.19.2021*

III. Structural Narrative

A. Introduction

We have reviewed the proposed interior renovations to the existing 5,730 square foot wood-framed building located at 10455 Torre Ave in Cupertino, CA. Our evaluation of the feasibility of the proposed renovations is based on the existing plans prepared by architect Stanton Elliot dated May 1977 and a site visit performed on August 23, 2022.

The existing building was originally constructed in 1977 and is predominantly one-story with a partial mezzanine. Based on the year of construction, we assume the building was designed in accordance with the 1976 Uniform Building Code (UBC). The proposed renovations will require an extensive remodel and retrofit of the existing building.

B. Design Criteria

The following design criteria will be utilized for the design of the Renovation:

Building Code: 2022 California Code of Regulations, Title 24, Part 2 (CBC)

Occupancy Category: B

Risk Category: Risk Category II

Floor Live Load: 50 PSF (offices), 100 PSF (stairs & corridors)

Roof Live Load: 20 PSF (reducible) – Roof is to be PV ready

Ultimate Wind Speed: Dependent on Risk Category (see discussion below and section F. Essential Services Building Eval.)

Seismic Importance Factor: Dependent of Risk Category (see discussion below and section F.)

An open-office layout has been proposed in the center of the building. To provide an open-office layout, the removal of two main lines of interior bearing walls, removal of the existing barrel-vaulted ceiling, and the removal of several interior posts that support the roof framing will be required. Where existing load bearing elements (walls and columns) will be removed to allow for the proposed programming, the existing roof will require re-support by new long span beams (either deep glued laminated beams or wide flange steel beams) over the central open space, and additional new beams along the existing corridors. The new beams will be supported by new wood and/or steel posts founded on new or augmented concrete pad footings, and the new wood framed bearing walls will be supported by new and/or augmented concrete strip footings. The existing 1,150 square foot mezzanine will be widened and modified to feature a new interior cantilevered balcony and stairway. This will require new floor framing at some locations, and re-support of the existing floor framing in other locations, along with the addition of new framing to support the stairs and balcony. To create a more welcoming entry, a new trellis will also be added to the exterior of the building, which is anticipated to be supported by new posts and footings.

A new trellis will also be added to the exterior of the building, which is anticipated to be supported by new posts and footings.

Due to the extensive modifications, a seismic evaluation and upgrade is required to meet the requirements of the Building Code. Material testing is recommended to determine the compressive strength of the existing footings. The testing is anticipated to consist of break tests conducted on approximately (3) concrete core samples taken from the existing footings.

C. Risk Category II Considerations

If the building is designed as a Risk Category II building (non-essential services), the retrofit to the existing lateral force resisting system will include the addition of new one-sided shear walls with sheathing applied to the interior face of exterior walls, along with new interior shear walls where required. New hold-downs will be required to resist uplift at the new shear walls, which will also require localized augmentation of the foundation. Supplemental framing and the installation of framing clips and straps will also be required in multiple locations.

IV. Mechanical Narrative

A. Project Description

The existing Cupertino City Hall Annex building is a single-story structure, approximately 5000 square feet, located in Cupertino, CA. The project scope includes the renovation of the structure, re-demising of interior spaces and replacement of all mechanical and plumbing systems. The mechanical and plumbing systems will be designed to be all-electric and highly energy efficient. The mechanical systems will provide excellent occupant comfort and adequate filtered fresh air all while minimizing operational costs.

B. Codes and Standards

2022 California Building Code
2022 California Mechanical Code
2022 California Plumbing Code
2022 Building Energy Efficiency Standards, Title 24, Part 6
2022 California Green Building Standard Code

C. Design Criteria

Outdoor Design Conditions:

Location:

City: Cupertino, CA

Latitude: 37.3 degrees

Longitude: -122.0 degrees

Elevation: 70 feet

California Climate Zone: 04

Summer:

Outdoor: 88 degrees Fahrenheit DB/67 degrees Fahrenheit WB

Figures represent conditions that are exceeded 0.5% of hours in a year.

Winter:

Outdoor: 33 degrees Fahrenheit

Figures represent conditions that are exceeded 0.2% of hours in a year.

Indoor Design Conditions:

Cooling: 75 degrees Fahrenheit

Heating: 68 degrees Fahrenheit

D. Mechanical Systems

i. Variable Refrigerant Flow (VRF) System

The primary mechanical system will be an all-electric VRF system consisting of a single outdoor unit connected to multiple indoor fan coil units via refrigerant piping to provide heating and cooling to each zone. The system will be fully modulating and may increase or decrease system output based on the space conditioning needs. If the heating or cooling loads in the space are low, the system will turn down and thus save energy and operating costs.

The system will have built-in heat recovery capability; if one space calls for cooling and another space needs heating, the system can provide “free” conditioning by transferring heat from one space to the other by transferring refrigerant via the branch box controller. This is especially relevant for high load spaces (fully occupied conference rooms, IDF or server rooms) and in the shoulder seasons where there may be both heating and cooling demands.

The building will be split up into thermal zones with each zone controlled by a dedicated thermostat. The breakdown of thermal zones will be further developed in the schematic design phase. The current proposed approach is to provide dedicated ductless fan coils at each conference room, huddle space, meeting room and break rooms. Each of these rooms will be provided with its own dedicated thermostat. The open office area will be provided with 2 ducted fan coils located in the mezzanine level mechanical rooms. Duct distribution and ceiling registers will be placed for optimal air distribution and to match the aesthetic of the architectural ceiling system.

The VRF system will be controlled by individual thermostats at each zone. Additionally, there will be a central controller to set master schedules, override setpoints and view system data and alarms.

Ceiling fans may be provided for additional occupant comfort by creating air movement and reducing stratification of air in the space.

ii. Ventilation Systems

Fresh air will be provided to the space at rates prescribed by California Title 24 Energy and Mechanical Codes. The ventilation air will be filtered with MERV-13 filters. The air will be pulled from building louvers or roof intake hoods. The air will be pulled through the return of the fan coils serving the open office space and will be fully conditioned prior to being supplied to the space.

iii. Exhaust Systems

Exhaust systems will be provided for the building at exhaust rates as determined by California Title 24 Energy and Mechanical Codes. An inline exhaust fan will be provided for the restrooms and set to operate continuously during occupied hours. An inline exhaust fan will be provided for the storage / print room. A ceiling exhaust fan will be provided for the shower room and small bathrooms and will operate continuously at low-speed. Upon detection of moisture, the fan will operate at high speed until the moisture level is satisfied.

A barometric relief damper will be placed at a high point in the building to provide passive air relief. If the space exceeds the set pressure due to high volumes of ventilation air, air will be relieved through the roof.

E. Plumbing Systems

i. Domestic Cold Water:

The building will be provided with a municipally supplied domestic cold-water connection. The existing cold-water main will be examined during a site visit and determined if it is adequately sized per the California Plumbing Code. The existing water service and backflow may be reused, pending on the schematic design site visit observations. Domestic water will be provided to all building plumbing fixtures; lavatories, water closets, sinks and showers and perimeter hose bibbs.

ii. Domestic Hot Water:

Domestic hot water will be generated by a single residential style heat pump water heater located at the mezzanine level storage room adjacent to the IDF closet. The heat pump water heater will pull otherwise waste heat from the server room and use it to heat the hot water. A backup electric coil will assure there is always hot water available. Hot water will be provided to the building plumbing fixtures; lavatories, sinks and showers. A small circulator pump on an aqua-stat and timer will be provided to reduce the wait time for hot water at each fixture and consequently will reduce energy and water consumption.

iii. Sanitary Sewer & Vent:

Sanitary sewer (waste) and vent will be connected to all new plumbing fixtures and tied into the existing sewer lateral. All waste and vent piping will be sized per the California Plumbing Code. Trenching and digging will be required to install the new waste piping for the new fixtures.

iv. Storm Drainage:

It is assumed the existing storm drainage system consisting of gutters and downspouts will be reused. The roof drainage scheme will be further developed with the architect during the schematic design phase if there are any changes required due to revisions to the roof.

v. Combustion Free Building

No natural gas appliances or systems will be implemented. The existing gas meter and service to the building may be coordinated for removal with PG&E.

vi. Plumbing Piping Materials:

Hot / Cold Water Piping: Copper, Type L, ASTM B88

Sanitary Sewer, Abv Grade: Cast Iron, No Hub ASTM A888

Sanitary Sewer, Bel Grade: Sch. 40 PVC-DWV, Solid Core, ASTM F1488

Vent: Cast Iron, No Hub, ASTM A888

Condensate: Copper, Type L, ASTM B88

V. Electrical Narrative

A. Introduction

Complete interior renovation of the 5730 SF single-story building located at 10455 Torre Avenue, to a relatively open floor plan layout, for use as an interim City Hall and Permit Center. The objective is to create a functional and flexible space to serve the public while the existing City Hall building undergoes renovation. The renovation includes lighting, power and signal systems including fire alarm system and intrusion alarm where required.

B. Codes and Standards

2022 California Electrical Code
2022 Building Energy Efficiency Standards, Title 24
2022 California Building Code
2022 NFPA 72 National Fire Alarm and Signaling Code
2022 NFPA 101 Life safety Code
Local City and County Agencies

C. Lighting System

A. Interior Lighting:

All existing lighting system including control system to be removed. New high-efficient lighting system with LED lamps will be provided.

New lighting control system that will include occupancy sensors and dimming switches. Lighting system to include local zone controls. Building Management System Integration is not anticipated.

Daylighting control of light fixtures where ambient light is abundantly high.

Emergency lighting system for egress pathway that will also include corridors, conference rooms and restrooms.

Lighted exit signs that will allow for tenants to find the egress route in the event of an emergency.

B. Exterior Lighting:

Exterior lighting on the perimeter of the building to be considered to meet egress requirements.

Lighting system is anticipated to be high efficacy fixtures with dimming features in compliance with the Title 24 Building Energy Efficiency Standards.

D. Power System:

All existing receptacle outlets in the renovated spaces are to be removed. New receptacle outlets to be provided generally to all spaces where office and miscellaneous equipment are located including in strategic places for flexibility of use.

Receptacle outlets to be GFCI type in the bathrooms, sink areas and spaces where water could be present.

Receptacle outlets with dedicated circuits to be provided for all equipment and spaces reserved for EOC equipment such as CAD, public safety radios, City radios Ham radios, City AM radio station, etc.

NOTE: Design requirements to be defined and coordinated with a City's System Integrator.

Receptacle outlets with dedicated circuits for all the screen display and projector locations.

Dedicated power circuits with disconnect switches to be provided to all mechanical and plumbing equipment locations.

Receptacle outlets to be provided within 25-Ft of mechanical units.

Receptacle outlets with dedicated circuits in the IDF/MDF room.

Power distribution system with remote panelboards within the renovated spaces.

Remove and replace with new the existing outdated 600A 120/208V 3-Phase 4-wire switchboard.

Raceway provisions for solar-ready roof.

E. Signal System and Data/AV System:

New voice/data jacks with cabling at each office desk/counter location.

New data jacks with cabling at each screen display and projector location.

New wireless access points for data connections.

New data rack/cabinet with patch panels for Data/AV systems landing.

Main fiber optic feed per the City's requirements.

Raceways and pull cords at all AV system equipment location.

Raceway and pull cord for communication antenna on roof.

NOTE: Specs for data rack/cabinet, patch panels and data cables (Cat 6 or Cat 6a) per the City's requirements. Data equipment/hardware and software are to be supplied by the City and are not part of the scope.

F. Fire Alarm and Intrusion alarm systems:

Layout fire alarm devices for a design-built system.

Include performance specifications and service requirements for the Fire Alarm system.

Raceways and pull cords at device locations in coordination with the intrusion alarm vendor

G. Fire Sprinkler Design Build

Include performance specifications and service requirements for the Fire Sprinkler System.

E. CODE RESEARCH & ANALYSIS

I. Governing Codes

2022 California Code of Regulations
2022 California Building Standards Administrative Code, Part 1, Title 24
2022 California Building Code (CBC) Part 2, Title 24
2022 California Electrical Code (CEC) Part 3, Title 24
2022 California Mechanical Code (CMC) Part 4, Title 24
2022 California Plumbing Code (CPC), Part 5, Title 24
2022 California Energy Code, Part 6, Title 24
2022 California Fire Code, Part 9, Title 24
2022 California Referenced Standards Code, Part 12, Title 24, Title 19, Public Safety, State Fire Marshal Regulations
2022 California Green Building Standards for Non-Residential Projects
2022 NFPA 13 Installation of Fire Sprinkler System
2022 NFPA 14, Installation of Standpipes and Hose Systems
2022 NFPA 72, National Fire Alarm Code, as amended by State Fire Marshal Occupational Safety and Health Act (OSHA)
2010 ADA Accessibility Guidelines for Building and Facilities (ADAAG)
Cupertino Municipal Code

II. Code Analysis

Building Use: Business (Permit Center)
Construction Type: VB
Occupancy Classifications: B, A-3, and Accessory storage areas.

Allowable Building Height: 60 feet if sprinklered, 40 feet if non-sprinklered
Allowable Number of Stories Above Grade Plane: 3 if sprinklered, 2 if non-sprinklered
Allowable Area: 27,000 SF if sprinklered, 9,000 if non-sprinklered

Existing Building Gross Area: 4,990 SF Occupant Load: 100 Occupants

Exits: 2 required, 3 existing

Exit Doorway Configuration: the separation shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served for buildings with an automatic sprinkler system.

Accessible Means of Egress: where more than one means of egress is required from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number of required exits.

Accessible Routes: at least one accessible route shall be provided within the site from accessible parking spaces and accessible passenger drop-off and loading zones; public streets and sidewalks; and public transportation stops to the accessible building or facility entrance they serve. Where more than one route is provided, all routes must be accessible.

Parking Spaces: 22 existing spaces.

Minimum Number of Required Accessible Parking Spaces: 1 space.

III. Fire Resistance Rating Requirements

Construction VB

Primary Structural Frame: 0 hours

Bearing Walls: 0 hours

Exterior/Interior: 0 hours

Nonbearing Walls/Partitions: 0 hours

Floor construction and associated secondary structural members: 0 hours

Roof construction and associated secondary structural members: 0 hours

Fire Resistance Rating Requirements for Exterior Walls Based on Fire Separation: 0 hours

IV. Plumbing Calculations per CPC Table 422.1

LOAD FACTOR= 100 (50 MALE, 50 FEMALE)

	MALE	FEMALE
WATER CLOSET	1	3
URINALS	1	
LAVATORIES	1	1
DRINKING FOUNTAINS		1
OTHER		1 SINK

The total number of required water closets for females shall be not less than the total number of required water closets and urinals for male.

VI. Permit Submittal Review Timeline

Per correspondence with Cupertino’s building officials, any exterior at the exterior triggers planning review. Once drawings are submitted for permit, drawings are routed to all departments, including the Planning department, to complete their initial review. The current review time is between 20 and 30 business days.

A pre-application meeting is recommended for the building department to provide more information regarding Project review and submittal requirements.

Planning Entitlements will be required for visible exterior improvements. 2-3 months may need to be added to the review time pending the extent of exterior improvements and pending whether a hearing is required or not.

VII. Required Tests to be provided by Owner

A. Hazmat investigation

Per the client provided Asbestos and Lead Survey Report, *HazMat Doc did not perform a full destructive survey of the property. The inspector did not tear into or destroy suspect finishes in order to determine what material, if any, exist in wall/ceiling/roof cavities, below grader, etc. It is however, recommended that an attempt be made to discover potentially “concealed” material(s) prior to construction activity that might impact those areas.*

As the provided HazMat report was limited to accessible materials and surfaces, it is our recommendation the client procure a destructive HazMat investigation of the Project site to determine what additional concealed materials may be hazardous and in need of remediation.

B. Termite Inspection

Per the client provided Inspections Report a termite inspection is recommended as some termite was noted in the building’s wood framed construction, more specifically at the eaves of the building, which should be removed.

F. ESSENTIAL SERVICES BUILDING EVALUATION

I. Introduction

In addition to the day to day use of the Permit Center, the City is considering making the Annex the permanent house of the Emergency Operations Center. In order for the Annex to be considered an Emergency Operations Center, the building must be considered an Essential Services Building.

As defined by the Health and Safety Code Division 12.5, Chapter 2, Article 2, section 16007, *an Essential Services Building means any building, including buildings designed and constructed, for public agencies used, or designed to be used, or any building a portion of which is used or designed to be used, as a fire station, police station, emergency operations center, California Highway Patrol office, sheriff's office, or emergency communication dispatch center.*

Per section 16001, it is the intent of the Legislature that essential services buildings, which shall be capable of providing essential services to the public after a disaster, shall be designed and constructed to minimize fire hazards and to resist, insofar as practical, the forces generated by earthquakes, gravity, and winds. It is also the intent of the Legislature that the structural systems and details set forth in working drawings and specifications be carefully reviewed by the responsible enforcement agencies using qualified personnel, and that the construction process be carefully and completely inspected. In order to accomplish these purposes, the Legislature intends to provide for the establishment of building standards for earthquake, gravity, fire, and wind resistance based upon current knowledge, and intends that procedures for the design and construction of essential services buildings be subjected to qualified design review and construction inspection.

It is further the intent of the Legislature that the nonstructural components vital to the operation of essential services buildings shall also be able to resist, insofar as practical, the forces generated by earthquakes, gravity, fire, and winds. The Legislature recognizes that certain nonstructural components housed in essential services buildings, including, but not limited to, communications systems, main transformers and switching equipment, and emergency backup systems, are essential to facility operations and that these nonstructural components should be given adequate consideration during the design and construction process to assure, insofar as practical, continued operation of the building after a disaster.

III. Geotechnical Investigation

Per section 16014, drawings and specifications for construction, reconstruction, remodeling, additions, or alterations which affect structural elements of structures in existence on January 1, 1986, shall be based upon an assessment of the geological conditions of the site and the potential for earthquake damage, relying upon geologic and engineering investigations and studies by personnel who are competent to report on geologic conditions and their potential for causing earthquake damage. This requirement may be waived by the enforcement agency if it determines that these requirements for the proposed essential services building project are unnecessary and would not be beneficial to the safety of the public.

IV. Inspector

Per section 16017, during construction or alteration of an essential services building, the building owner shall provide for, and the local enforcement agency shall require, competent, adequate, and detailed inspection by a qualified inspector. To be qualified, inspectors shall have an adequate level of expertise and experience in the subject matter for which they have responsibilities for inspection as prescribed by this section.

V. Enforcement Agency

The Division of the State Architect (DSA) is the enforcement agency for state-owned or leased facilities. The local building department is the enforcement agency for this Project. A written notification by the local enforcement agency shall be submitted to DSA when the drawings and specifications for construction are approved.

II. Applicable Codes

Per section 16009, when the enforcement agency is a local agency, drawings and specifications comply with the locally adopted editions of the model codes, as defined in Section 18916, the administrative regulations contained in Part 1 (commencing with Section 1-101) of Title 24 of the California Code of Regulations, and the regulations contained in Part 2 (commencing with Section 101), except for Chapters 23 to 30, inclusive, and Chapter 47 of Title 24 of the California Code of Regulations.

III. Structural Considerations

If the building is designed as a Risk Category IV building (essential services), the retrofit to the existing lateral force resisting system will be more extensive. The seismic forces used for design will be 50% higher than for a Risk Category II building. The following augmented retrofit scope is anticipated if an upgrade to an essential services building is desired:

- A. A new geotechnical investigation that includes an analysis of seismic hazards and provides seismic design and foundation parameters.
- B. New double-sided plywood shear walls at exterior walls, requiring the removal and replacement of the stucco finish, or additional interior shear walls which would bear on new cripple walls and concrete footings within the crawlspace.
- C. Larger hold-downs at ends of shear walls, and additional sill plate anchors, with more extensive modifications to the foundation (see note below).
- D. More extensive foundation strengthening at shear walls. The majority of the existing continuous footings are only 12 inches wide, which will be inadequate in many locations. The expected strengthening would include widening of footings via drilled epoxy dowels, or removal and replacement of portions of footings.
- E. Potential roof diaphragm strengthening at new shear walls. This is expected to entail new wood blocking, framing clips, and straps, installed from the underside of the roof to avoid conflict with the existing clay tile roofing.

IV. Mechanical Considerations

As the building is being considered for use as an Emergency Operations Center, the mechanical and plumbing systems are deemed "essential" and will need to be provided on backup power. The HVAC and plumbing equipment that is outlined in the Mechanical narrative will remain unchanged for the application of an essential services building. However, after discussions with the City representative, all of the equipment will need to be provided on backup power. An additional mini-split or fan system on a t-stat may be required to assure critical communication devices are kept with temperature design limits.

VIII. Electrical Considerations

In addition to the Electrical narrative requirements mentioned previously, the following additional requirements apply.

Additional Codes and Standards:

2022 CEC, Chapter 7 Special Conditions

2021 NFPA 37 Standards for Stationary Combustion Engines and Gas Turbine

2022 NFPA 110 Standards for Emergency and Standby Power Systems

2022 NFPA 111 Standards on Stored Electrical Energy Emergency and Standby Power Systems

The systems deemed essential, like lighting and data, shall run between 2 and 4 hours in back-up power while the Uninterruptable Power Supply or Power Wall system (UPS) is connected to the generator for continuous use. Three types of loads are available, emergency circuit, legally required stand-by circuit, and the options stand-by circuits. Transfer switch needs to be automatic. Exact requirement for considering transition from normal power to emergency power will need to be determined. Considerations will need to include electrical load, UPS needs duration based on the city's operational requirement, and backup power sizing and needs.

H. PROJECT PROGRAM

I. Program

The following tables compare the existing City Hall program with the Proposed City Hall Annex program given the existing building's size.

EXISTING CITY HALL PROGRAM SPACE*

FIRST LEVEL		LOWER LEVEL	
DEPARTMENT	AREA (SF)	DEPARTMENT	AREA (SF)
HUMAN RESOURCES	375	CDD	2,555
PUBLIC WORKS	835	PUBLIC WORKS	1,300
FINANCE	815	VIDEO	750
IT & MDF	1,125		
EOC	1,345	TOTAL	4,605
CMO	2,115		
SUPPORT	12,875		
TOTAL	19,485		

* Square footages obtained from client-produced program, square footages not verified by Architect.

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PROPOSED CUPERTINO PROGRAM SPACE

FIRST LEVEL	
SPACE	AREA (SF)
EXTERIOR WAITING AREA	200
LOBBY	340
FRONT DESKS	170
OPEN WORK AREA	864
HUDDLE 1	78
HUDDLE 2	78
PHONE ROOM	48
SMALL CONFERENCE ROOM	110
SMALL CONFERENCE ROOM	110
EOC STORAGE	144
WORKING ROOM	202
LARGE MEETING ROOM	362
VIDEO CONFERENCE	172
ACCESSIBLE RESTROOM	52
SHOWER ROOM	70
WELLNESS ROOM	54
WOMENS	148
MENS	148
COFFEE ROOM	220
EXTERIOR DECK	226
COPY/SUPPLY/PRINT	64
SECURE STORAGE PRINT	60
MOP CLOSET	20
LOCKERS	20
GENERAL STORAGE	95
TOTAL	4,055

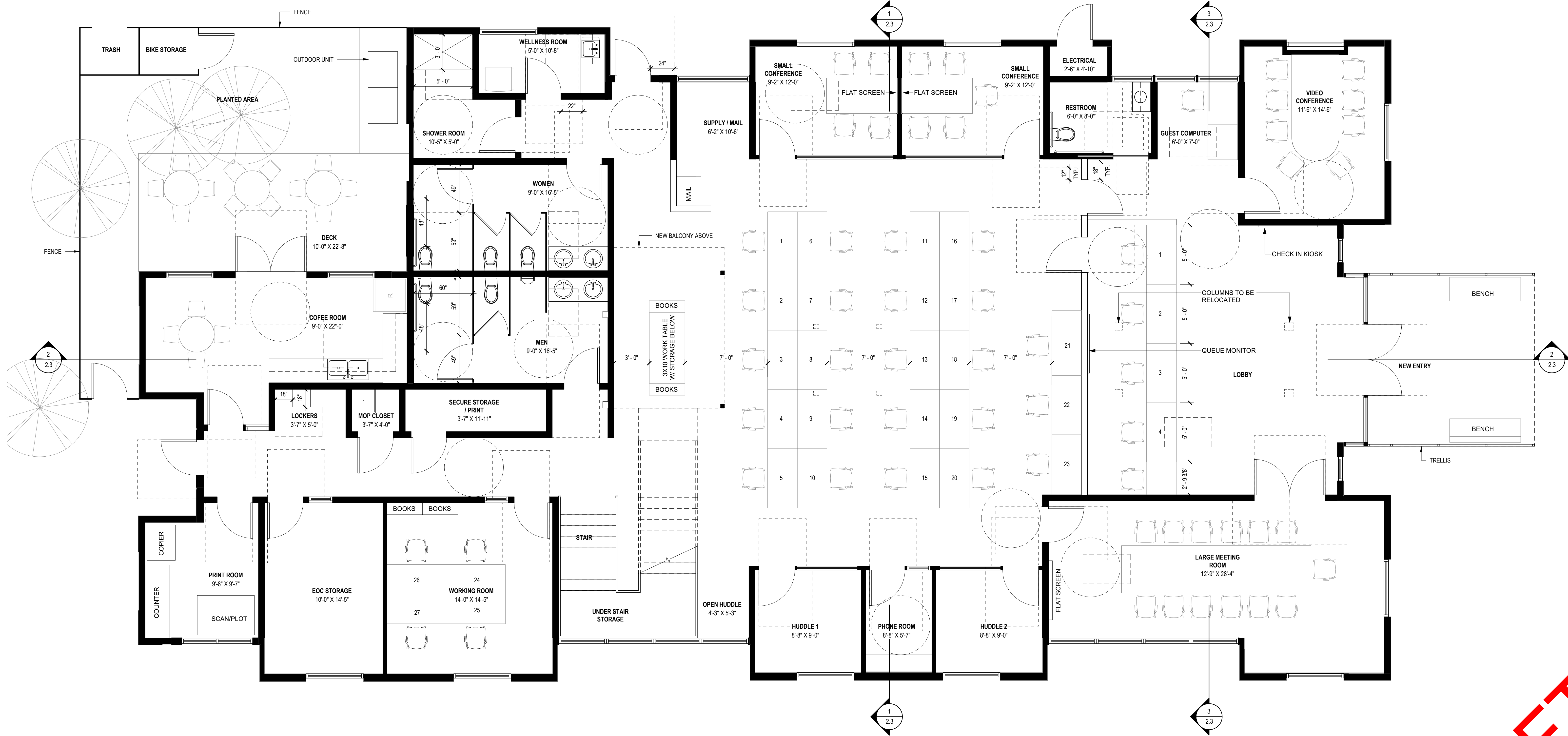
SECOND LEVEL	
SPACE	AREA (SF)
PROJECT ROOM	316
MECHANICAL CLOSET	46
MECHANICAL STORAGE	95
IDF	98
BALCONY	111
TOTAL	666

LEGEND

COMMON
MEETING/FLEX WORKING
STAFF
SUPPORT
ACCESSORY/STORAGE

J. ATTACHMENTS

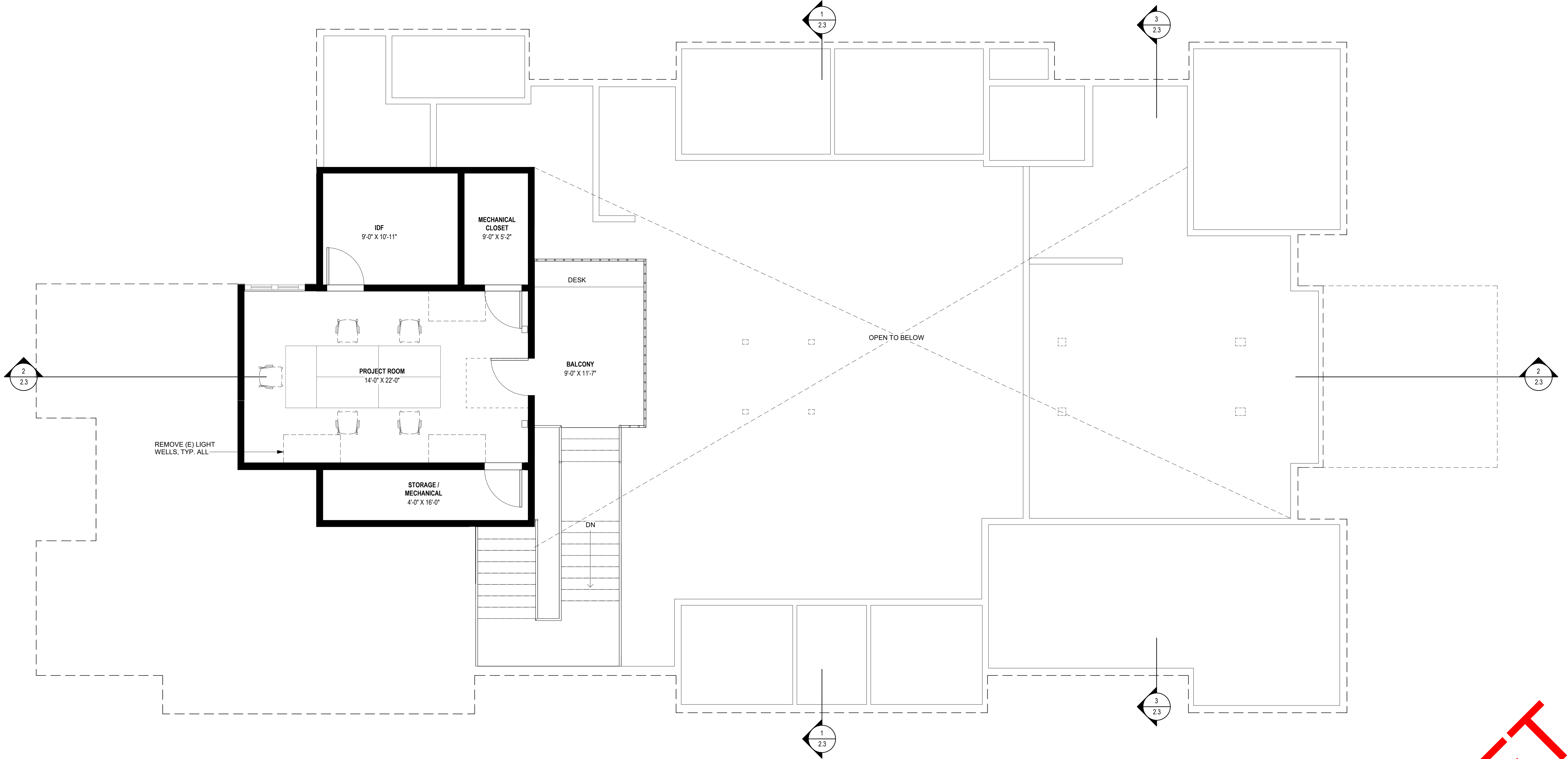
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1 PROGRAM PLAN LEVEL 1
 2.1 SCALE: 1/4" = 1'-0"

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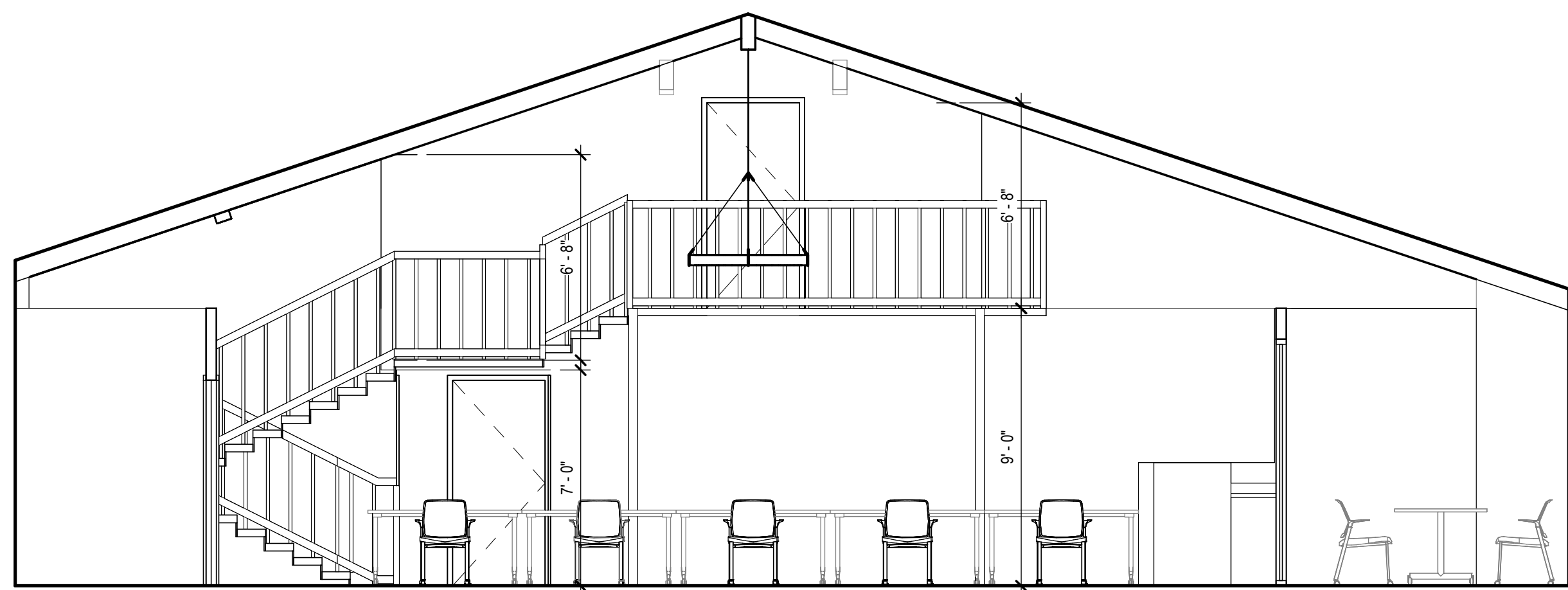




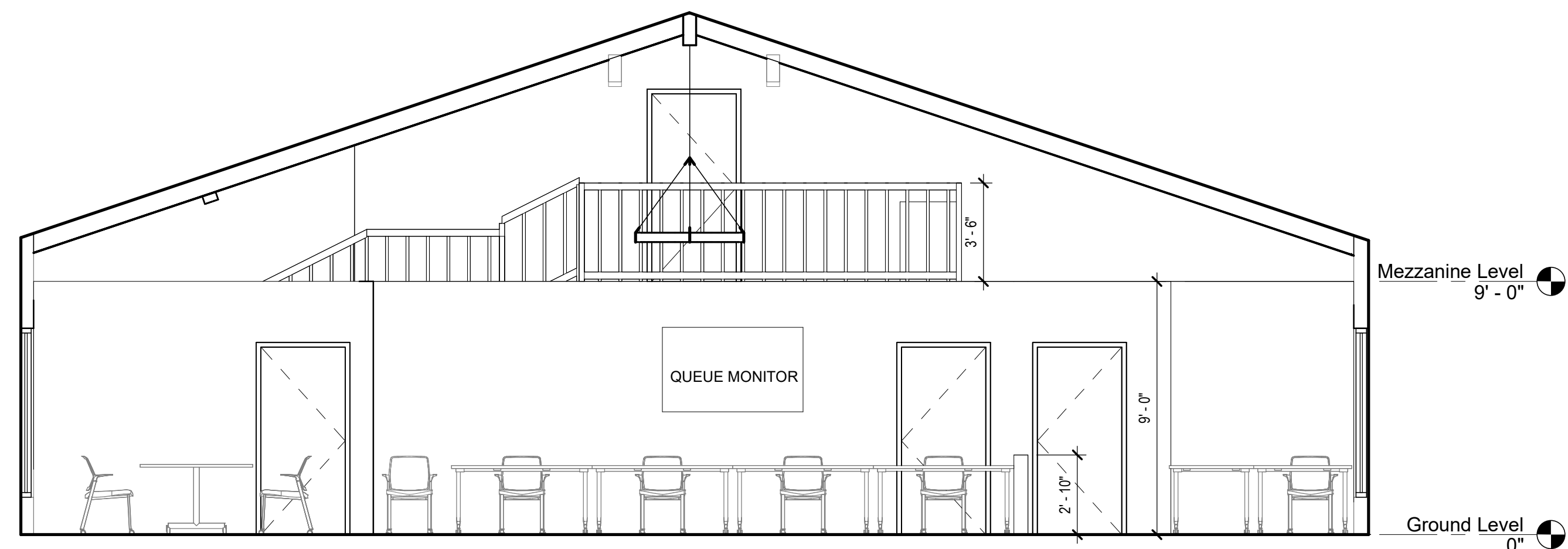
1 PROGRAM PLAN LEVEL 2
2.2 SCALE: 1/4" = 1'-0"

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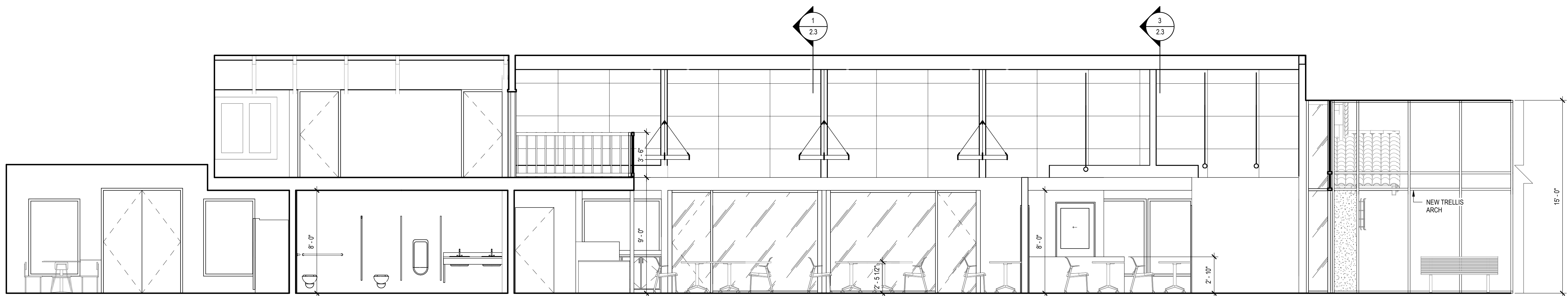




1
2.3 PROGRAM - SECTION B1
SCALE: 1/4" = 1'-0"



3
2.3 PROGRAM - SECTION B2
SCALE: 1/4" = 1'-0"



2
2.3 PROGRAM - SECTION A
SCALE: 1/4" = 1'-0"

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Department	Item Description	Manufacturer/model	Dimensions	Special features	Move to Annex(yes/no)	Item photo
Finance	Printer	HP Laser Jet 600 M602	16.25" W x 20"D x 20.5" H	None; standard plug	Yes	
Finance	Safe	Did not see label	21" W x 21.5" D x 25.5" H	Should be placed on floor; heavy; is accessed 4 times a week	Yes	
Finance	Small Check scanner	Did not see label	15" W x 6" D x 7 "H	Sits on a desk or counter; standard duplex plug	Yes	
Finance	Black metal box with slot at top; locked.	Did not see label	12" W x 3" D x 12" H	Wall mounted	Yes	
Finance	Cash window and counter top with 2 monitors; 2locked cash drawers	N.A.	48" W x 24" D	Existing counter has locked sliding window to public area. Currently has 3 cameras over the counter internal area	Yes; will need in Annex	
Finance	Key safe	Manufacturer name is "Key Watcher"	20.5" W x 13'D x 34" H	Powered key safe; not clear if it is battery operated or plug in	Probably not/ TBD	

Planning	Public computer check in kiosk on counter	No Manufacturer; keyboard and monitor	32"W x 18" D x 20" H;	counter is fixed to wall as a shelf at 29" AFF; must be ADA complaint for equivalent access	Yes? TBD	
Planning	Printers	(1) needed to serve all public facing counters	TBD	Should be located behind counter for ease of access to team working at the counter	Actual printer TBD	
Planning	Wall pin up space	For Zoning maps	Average size map is 36"W x 24" H	Should be visible at Planning counter for use by Planning staff when dealing with the public at the counter.	Yes	
Planning and Building	Code binders in hard copy format on shelves	N.A.	Sets of binders (need 2 sets on site); each binder 12" D x 11.5" H one set is 36" L	On shelves near team work area	Yes	
Planning and Building	Misc. reference books	N.A.	Miscellaneous books and hard copy reference materials; 48" lineal	On shelves near team work area	Yes	
Planning and Building	"Q-Less" monitor	Flat screen display	48" or 56" diagonal display. Requires power and data connections	One display in public lobby area; one display in Open workstation area	Yes; need 2 display monitors	
Planning and Building	Printer	HP 4200n	15.5" W x 20" D x 20" H	May sit on a counter or table. Accessed by the team in the work area	Yes	

Planning and Building	Scanner	Fujitsu Fi-6670	16" W x 29" D x 12"H	May sit on a counter or table. Accessed by the team in the work area	Yes	
Planning and Building as well as other departments	Microfiche storage; locked metal cabinet with shelves.	N.A.	21.5" W x 52" H x 29.5" D	Storage required for microfiche files that have not yet been digitized. Sits near work area.	Yes	
Planning and Building	PPE Storage for Inspectors	N.A.	(2) 36" W x 18" D x 12" H Lateral file drawers	In Staff office area for use on site inspections	Yes	
Public Works	Large format scanner and plotter	HP Designjet T2600	58" W x 48" H x 40" D	Currently in a room, but might be in the open if there is space for it	Yes	
Public Works	Event Materials storage	(4) Collapsible tents in carrying cases; (1) folding table	Tent storage: 10" W x 10" D x 49" H; Folding table 72" L x 36" W x 3" D (folded)	Used for outdoor events	Yes	
Development Services and Transportaion	PPE Storage	N.A.	(2) 36" W x 18" D x 12" H Lateral file drawers	In Staff office area for use on site inspections	Yes	
Environmental Services	Flood Information Storage Cabinet	N.A.	(1) Cabinet, 36" W x 18" D x 41.25" H	For staff use; near staff working area	Yes	

Environmental Services	Stormwater Management Binders	N.A.	120" (10 lineal feet) of binder storage	For staff use; near staff working area	Yes	
Shared Resources	Presentation Board storage	N.A.	Storage for Presentation boards. Average size is 36" x 48"	Might be good to have near the large conference room	Will need in the Annex	
Shared Resources	Check-in kiosk for counters	N.A.	Area for a retractable banner 36" W x 72" high and an "iPad on a stick" for registering and signing in.	Should be located at public entry to the conuter area	Yes	

Shared Resources	Large format copier (Copier 1)	Sharp MX-7580	106" (8'-10") L x 36" D x 48" H	Very large format. Needs a dedicated outlet; verify all hook up requirements with manufacturer.	Yes/ TBD	
Shared Resources	Small format copier (Copier 2)	Sharp MX-6070V	36" W x 29" D x 46" H	Regular sized copier. Free standing	Yes	
Shared Resources	Postage machine	Did not see label	93" (7'-9") W x 24" D x 23" H (height includes display monitor)	Postage and stamping machine; sits on top of counter	TBD	
Shared Resources	Folding machine	Did not see label	66" (5'-6") W x 26" D x 28" H	For folding mailers; sits on counter near postage machine	TBD	
Shared Resources	Mail Cart	Appears to be Metro	Did not measure	Mail cart for distribution of mail	TBD	
Shared Resources	Shelving with Mail bins	Appears to be Metro	48" W x 16" D x 72" H	Angled metal shelves with blue bins for mail	TBD	
Shared Resources	Work table	N. A.	72" L x 36" W	Layout table for reviewing large format documents	Will need the equivalent in Annex	