RESOLUTION NO. 18-8582

A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA TO OVERRULE THE APPEAL AND UPHOLD THE ADOPTION OF THE MITIGATED NEGATIVE DECLARATION AND THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TWO-STORY DATA CENTER PROJECT LOCATED AT 2305 MISSION COLLEGE BOULEVARD, SANTA CLARA, CALIFORNIA

PLN2017-12535 (Architectural Review)
CEQ2017-01034 (Mitigated Negative Declaration)

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, on March 7, 2017, Clarke Michalak, ("Applicant") filed an application for a development proposal to allow the development of a two-story 495,610 square foot data center on a 15.7 acre site at 2305 Mission College Boulevard ("Project Site");

WHEREAS, the Applicant applied for the demolition of an existing two-story 358,000 square foot office/R&D and construction of a two-story 495,610 square foot data center building with equipment yards and onsite improvements ("Project") as shown on the Development Plans, attached hereto and incorporated herein by this reference;

WHEREAS, in conformance with CEQA, the Mitigated Negative Declaration (MND) and the Mitigation Monitoring and Reporting Program (MMRP) were prepared and a Notice of Availability was circulated for a 30-day period from March 5, 2018 to April 5, 2018, with an approved extension of the review period to April 12, 2018;

WHEREAS, on April 18, 2018, the Architectural Committee (AC) adopted a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MND/MMRP) and approved a two-story 495,610 square foot data center at the Project Site;

WHEREAS, on April 24 and April 25, 2018, respectively, the firm representing Laborers International Union of North America, Lozeau Drury LLP, and the firm representing the California Unions for Reliable Energy, Adams Broadwell Joseph & Cardozo (collectively, the "Appellants"), filed timely appeals on concerns related to the MND;

WHEREAS, on June 13, 2018, the Planning Commission held a duly noticed public hearing to consider the appeals of the Architectural Committee approval of the MND, MMRP, and Architectural Review, at the conclusion of which, the Planning Commission voted to overrule the appeals and uphold the Architectural Committee's actions;

WHEREAS, in the event the Applicant or others affected are not satisfied with the decision of the Planning Commission, he or she may within seven days after such decision appeal in writing to the City Clerk;

WHEREAS, on June 20, 2018, the same Appellants filed timely appeals of the Planning Commission's action;

WHEREAS, the June 20 appeals raised largely the same issues that the Appellants raised with the Planning Commission: concerns about the air quality analysis, greenhouse gas analysis, noise impacts during emergency operation, battery impacts, cancer risk, and other health risks, and a request that a full Environmental Impact Report (EIR) be prepared rather than an MND;

WHEREAS, environmental consultant David J. Powers & Associates, Inc. prepared a "Responses to Comments" on the MND and a "Supplemental Memo for 2305 Mission College Boulevard Data Center Project" that responds to each one of the Appellants' concerns.

WHEREAS, on July 6, 2018, the notice of public hearing for the July 17, 2018, City Council meeting for this item was posted in three conspicuous locations within 300 feet of the project site and was mailed to property owners within a 300 foot radius; and

WHEREAS, on July 17, 2018, the City Council held a duly noticed public hearing to consider the appeal of the Planning Commission's approval of the MND, MMRP, and Architectural Review, at which time all interested persons were given an opportunity to provide testimony and present evidence, both in support of and in opposition to the appeal.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. That the City Council hereby finds that the above Recitals are true and correct and by this reference makes them a part hereof.

2. That based upon the MND, Responses to Comments, MMRP, and Supplemental Memo for 2305 Mission College Boulevard Data Center Project, the City Council hereby finds that all potentially significant environmental impacts that may directly or indirectly result from the Project would be reduced to a less-than-significant level by the mitigation measures specified in the MND and MMRP.

3. That the City Council hereby overrules the Appellants' appeal and upholds the Planning Commission's June 13, 2018 decision, which in turn overruled the Appellants' previous appeal and upheld the Architectural Committee's adoption of the MND and MMRP for the Project as required by the CEQA Guidelines (14 Cal. Code of Regs. § 15074).

4. That the City Council hereby finds that the MND and MMRP completed for this Project has been completed in compliance with CEQA, and that approval of this project as mitigated will have no significant negative impacts on the area's environmental resources, cumulative or otherwise, as the impacts as mitigated would fall within the environmental thresholds identified by CEQA, and the MND reflects the City Council's independent judgment and analysis.

5. The City Council hereby designates the Planning Division of the Community Development Department as the location for the documents and other material that constitute the record of proceedings upon which this decision is based, and designates the Director of Community Development as the custodian of records.

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6. Effective date. This resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE 17th DAY OF JULY, 2018, BY THE FOLLOWING VOTE:

AYES:	COUNCILORS:	Davis, Kolstad, Mahan, O'Neill, and Mayor Gillmor
NOES:	COUNCILORS:	Watanabe
ABSENT:	COUNCILORS:	None
ABSTAINED:	COUNCILORS:	None

ATTEST: _____
for JENNIFER YAMAGUMA
ACTING CITY CLERK
CITY OF SANTA CLARA

Attachments Incorporated by Reference:
1. Mitigated Negative Declaration, including Responses to Comments (Previously Distributed)
2. Supplemental Memo for 2305 Mission College Boulevard Data Center Project (Previously Distributed)
3. Mitigation Monitoring and Reporting Program (MMRP)
4. Development Plans

Initial Study

for the

2305 Mission College Boulevard Data Center Project

File No(s): PLN2017-12535

City of Santa Clara

March 2018

TABLE OF CONTENTS

Figures

TABLE OF CONTENTS

Photos

Tables

Appendices

ACRONYMS AND ABBREVIATIONS

ABAG	Association of Bay Area Governments
ACMs	Asbestos-containing materials
AIA	Airport Influence Area
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CA ENF	California Enforcement Action
CA EMI	California Air Emissions Database
CalEPA	California Environmental Protection Agency
CA Haznet	California Hazardous Waste Information System
Cal/OSHA	California Occupational Safety and Health Administration
CAP	Clean Air Plan
CARB	California Air Resources Board
CA SLIC	California Spills, Leaks Investigation and Cleanup
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQA	California Environmental Quality Act
CH_4	Methane
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO_2e	Carbon dioxide equivalent
CUPA	Certified Unified Program Agency
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
FIRM	Flood Insurance Rate Maps
GHG	Greenhouse gas
LID	Low Impact Development
LUST	Leaking Underground Storage Tank

MND	Mitigated Negative Declaration
MT	Metric tons
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO_x	Nitrogen oxide
NOD	Notice of Determination
NPDES	National Pollutant Discharge Elimination System
O_3	Ozone
$PM_{2.5}$	Fine particulate matter
PM_{10}	Particulate matter
RCRA	Resource Conservation and Recovery Act
RCRA-SQG	Resource Conservation and Recovery Act – Small Quantity Generators
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SCCDEH	Santa Clara County Department of Environmental Health
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SFHA	Special Flood Hazard Areas
SVP	Silicon Valley Power
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TMDLs	Total maximum daily loads
USFWS	United States Fish and Wildlife Service
USTs	Underground storage tanks
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
MND	Mitigated Negative Declaration
NOD	Notice of Determination
RWQCB	Regional Water Quality Control Board
USFWS	United States Fish and Wildlife Service

SECTION 1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE OF THE INITIAL STUDY

The City of Santa Clara as the Lead Agency, has prepared this Initial Study for the proposed 2305 Mission College Boulevard Data Center project in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et. seq.) and the regulations and policies of the City of Santa Clara, California.

The project proposes to construct a 495,610square-foot (sf) data center facility. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

1.2 PUBLIC REVIEW PERIOD

Publication of this Initial Study marks the beginning of a 30-day public review and comment period. During this period, the Initial Study will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this Initial Study during the 30-day public review period should be sent to:

City of Santa Clara
Community Development Department
Contact: Steve Le, Assistant Planner
1500 Warburton Avenue
Santa Clara, CA 95050
(408) 615-2450

1.3 CONSIDERATION OF THE INITIAL STUDY AND PROJECT

Following the conclusion of the public review period, the City of Santa Clara will consider the adoption of the Initial Study/Mitigated Negative Declaration (MND) for the project at a regularly scheduled meeting. The City shall consider the Initial Study/MND together with any comments received during the public review process. Upon adoption of the MND, the City may proceed with project approval actions.

1.4 NOTICE OF DETERMINATION

If the project is approved, the City of Santa Clara will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075(g)).

SECTION 2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

2305 Mission College Boulevard Data Center (PLN2017-12535)

2.2 LEAD AGENCY CONTACT

Steve Le, Assistant Planner
City of Santa Clara
Community Development Department
1500 Warburton Avenue
Santa Clara, CA 95050
(408) 615-2450

2.3 PROJECT APPLICANT

PR III 2305 Mission College Boulevard, LLC
Four Embarcadero, Suite 2700
San Francisco, CA 94111

2.4 PROJECT LOCATION

2305 Mission College Boulevard, Santa Clara CA

2.5 ASSESSOR'S PARCEL NUMBER

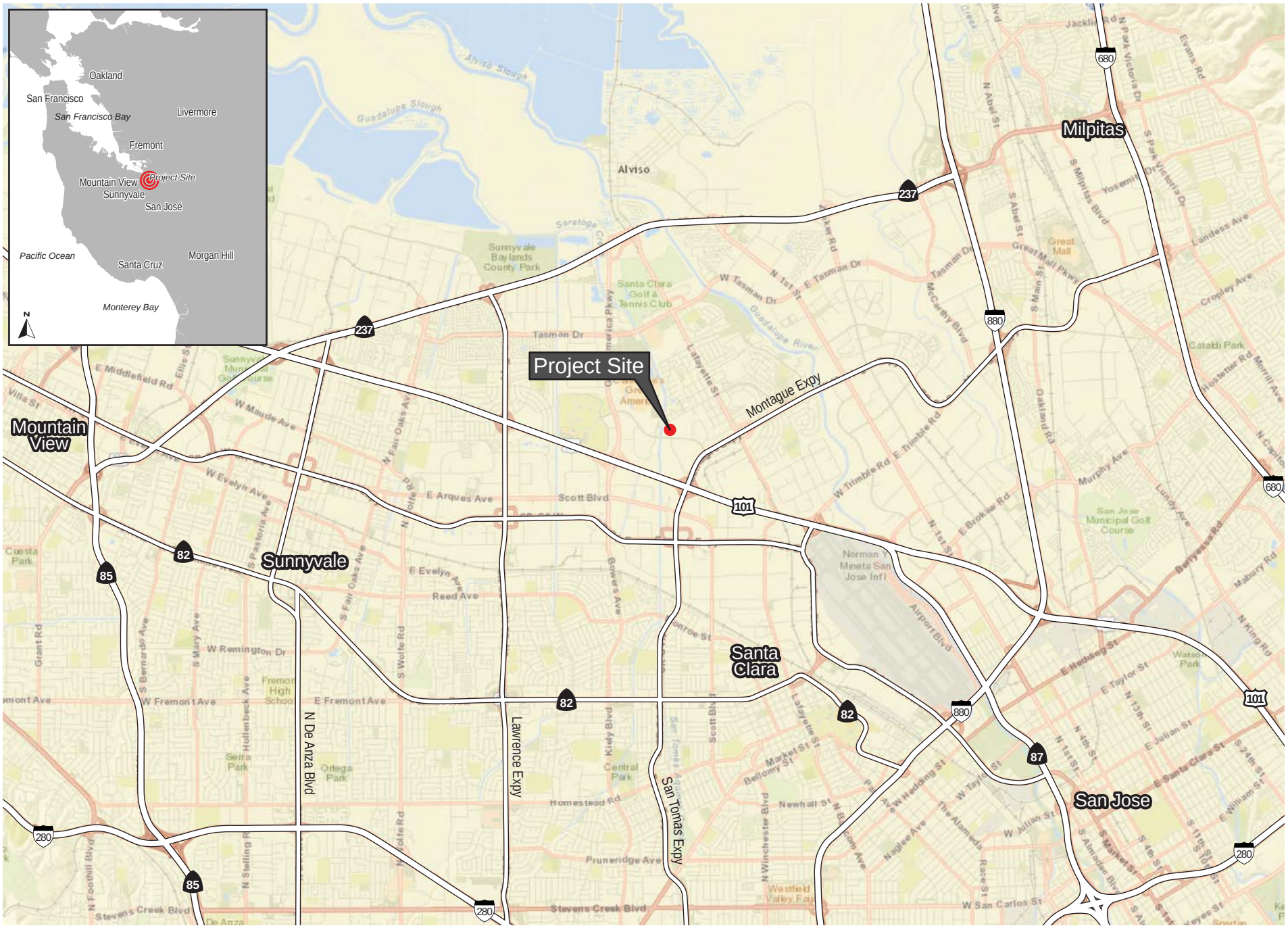
104-13-096

2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

General Plan: *Low Intensity Office R&D*
Zoning: *Light Industrial*

2.7 PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS

Architectural Review
Building Permit

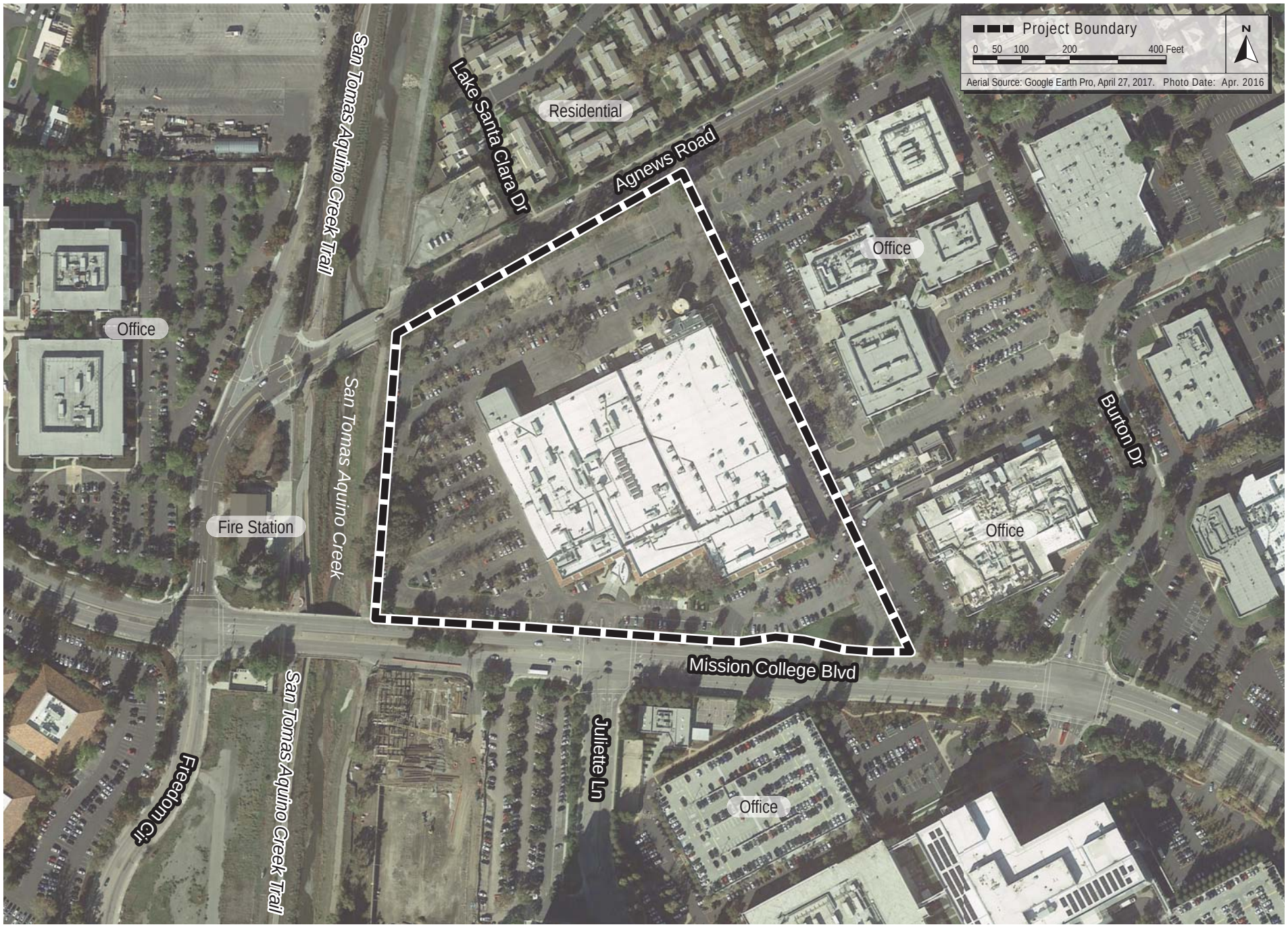


REGIONAL MAP

FIGURE 2.0-1

VICINITY MAP

FIGURE 2.0-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.0-3

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROPOSED DEVELOPMENT

The 15.7-acre project site, located at 2305 Mission College Boulevard, is currently developed with a two-story 358,000 square foot (sf) office/R&D building and a paved parking lot. The project proposes to demolish the existing improvements on the site to construct a two-story 495,610 sf data center building. The data center building would house computer servers for private clients in a secure and environmentally controlled structure, and would be designed to provide 60 megawatts (MW) of information technology (IT) power. The first floor, approximately 201,489 sf, and second floor, approximately 202,870 sf, would each contain 30 MW of IT equipment. Mezzanines on each floor would be located on both the eastern and western sides of the building, and would occupy approximately 46,389 sf on the first floor, and 44,922 sf on the second floor. Office space and employee amenities would be located in a wing on the western side of the building. Mechanical equipment for building cooling would be located on the roof.

Standby backup emergency electrical generators would be installed to provide for an uninterrupted power supply. A total of 120 625-kW diesel-fueled engine generators would be located within a generator yard west of the data center building. The generator yard would be completely enclosed by a combination masonry and metal wall. The wall would be 21 feet tall on the northern, eastern, and southern sides of the yard and 26 feet on the western side. The generators would provide 75 MW of backup power generation capacity. Diesel fuel for the generators will be stored in 24, 10,000-gallon above ground tank, with one tank located beneath each block of five generators. Electrical and backup battery equipment would be located in a separate equipment yard in the northern portion of the project site near Agnew Road. Screening for the electrical and backup battery equipment yard would be provided by a 16 foot wall along the northern and eastern sides of the yard. The entire perimeter of the site would be enclosed by either screening walls or an eight-foot high security fence.

The project would also construct a new 90 megavolt amps (MVA) electrical substation in the northeastern portion of the site, adjacent to the San Tomas Aquino Creek corridor and Agnew Road. The three-bay substation (three 30 MVA 60 kV-12kV step-down transformers) would have an all-weather asphalt surface underlain by an aggregate base. A concrete masonry unit screen wall, 13 feet in height, would surround the substation. The substation would connect to existing 60 kV overhead lines located on Agnew Road. Electrical power from the substation would be distributed to the data center through 12kV underground distribution lines.

3.1.1 Building Heights and Setbacks

The data center building would be approximately 59 feet in height, with parapets extending to a height of 70 feet to screen mechanical equipment on the roof. The building would be located on the eastern portion of the site and set back approximately 166 feet from the northern property line on Agnew Road, 63 feet from the southern property line on Mission College Boulevard, and 61 feet from the eastern property line with the adjacent development. Along the western border of the site, the screening wall for the generator yard would be set back roughly 58 feet from the property line and 90 feet from the top of the bank of San Tomas Aquino Creek. The screening wall for the substation would be set back roughly 10 feet from the property line and 40 feet from the top of the bank of the creek.

3.1.2 Site Access and Parking

Access to the site would be provided by a driveway on Mission College Boulevard where it intersects with Juliette Lane. The driveway would be approximately 62 feet in width, and would be in the same location as the existing primary driveway entrance to the current development on the site. A secondary driveway entrance for emergency access would be constructed on Agnew Road in the western portion of the site and would be approximately 30 feet in width. The project would remove two existing driveways, one on Agnew Road at the site's southeastern corner and one on Mission College Boulevard at the site's northeastern corner. The project would provide approximately 75 parking spaces located along the western and southern sides of the building.

3.1.3 Site Grading, Excavation, and Construction

The existing improvements on the site would be demolished to allow for construction of the project. Demolition and construction activities would last approximately 15 months. Roughly 46,000 cubic yards of fill would be imported to the site to raise the base elevation by approximately four feet. Excavation for utilities would extend to depths of up to 12 feet below the new base elevation. The site would be graded to direct stormwater flows towards biotreatment areas located along the northern and southern boundaries of the site.

3.1.4 Landscaping

The project proposes to remove approximately 234 existing trees on-site and plant 199 replacement trees. New landscaping consisting of trees, shrubs, and groundcover would be installed parallel to the main driveway aisle entrance on Mission College Boulevard, around the perimeter of the building, and along the property boundaries. Recycled water from the City of Santa Clara water utility would be utilized for landscape irrigation.

3.1.5 Stormwater Controls

The project proposes to construct seven stormwater treatment areas totaling approximately 21,064 sf. The site would be graded to direct stormwater into biotreatment areas via curb slots adjacent to the treatment areas. All treatment areas would drain into the public storm drain line in Agnew Road.

3.1.6 Sanitary Sewer and Electric Easements

A portion of an existing 15-foot sanitary sewer easement along the western property boundary would be removed to accommodate the proposed substation. The sanitary sewer line would be redirected and constructed within the future access roads surrounding the substation to reconnect to the existing sanitary sewer line that would be located under the future driveway aisle between the substation and equipment yard. A new easement will be required to accommodate the realignment of the sanitary sewer line.

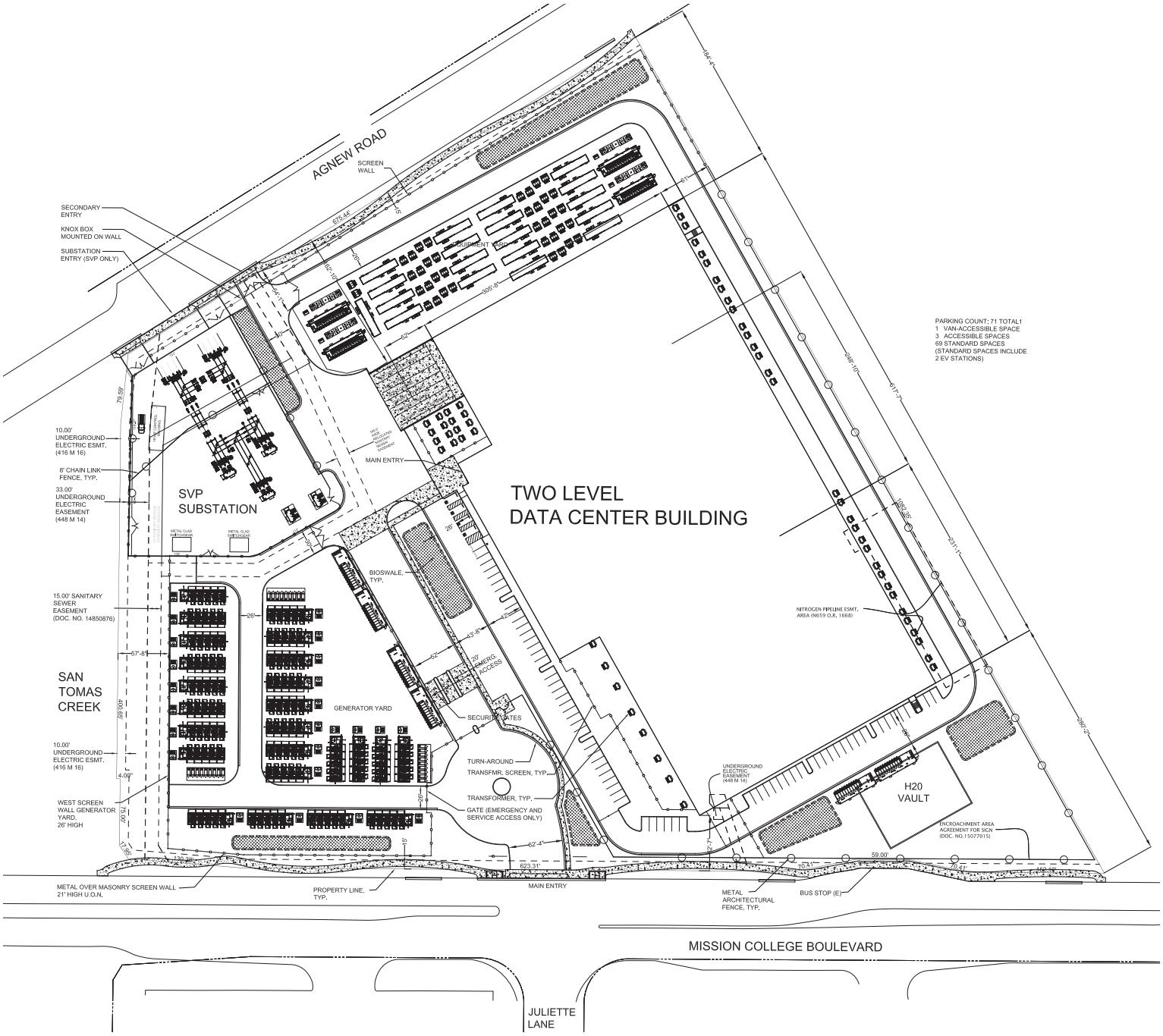
The project would require 10-foot underground electric easements along the northern and southern boundaries of the site, adjacent to Agnew Road and Mission College Boulevard, respectively.

3.1.7 Interim Electricity Supply

The data center may begin operating prior to completion of the proposed electrical substation. To provide electricity to the data center during this interim period, the project would extend an underground 12 kV electrical line to the site from an existing line in Mission College Boulevard. The environmental impacts resulting from the extension of this underground electrical line are included in the analysis in this Initial Study.

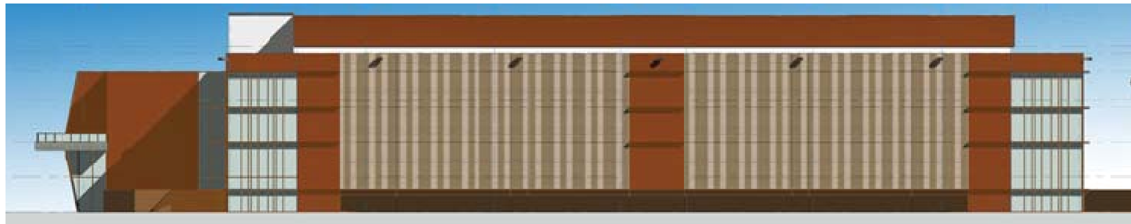
3.1.8 Generator Testing Schedule

The 120 emergency backup generators would each be tested once per month at full load for up to one hour. No more than 45 generators would be tested at any one time.



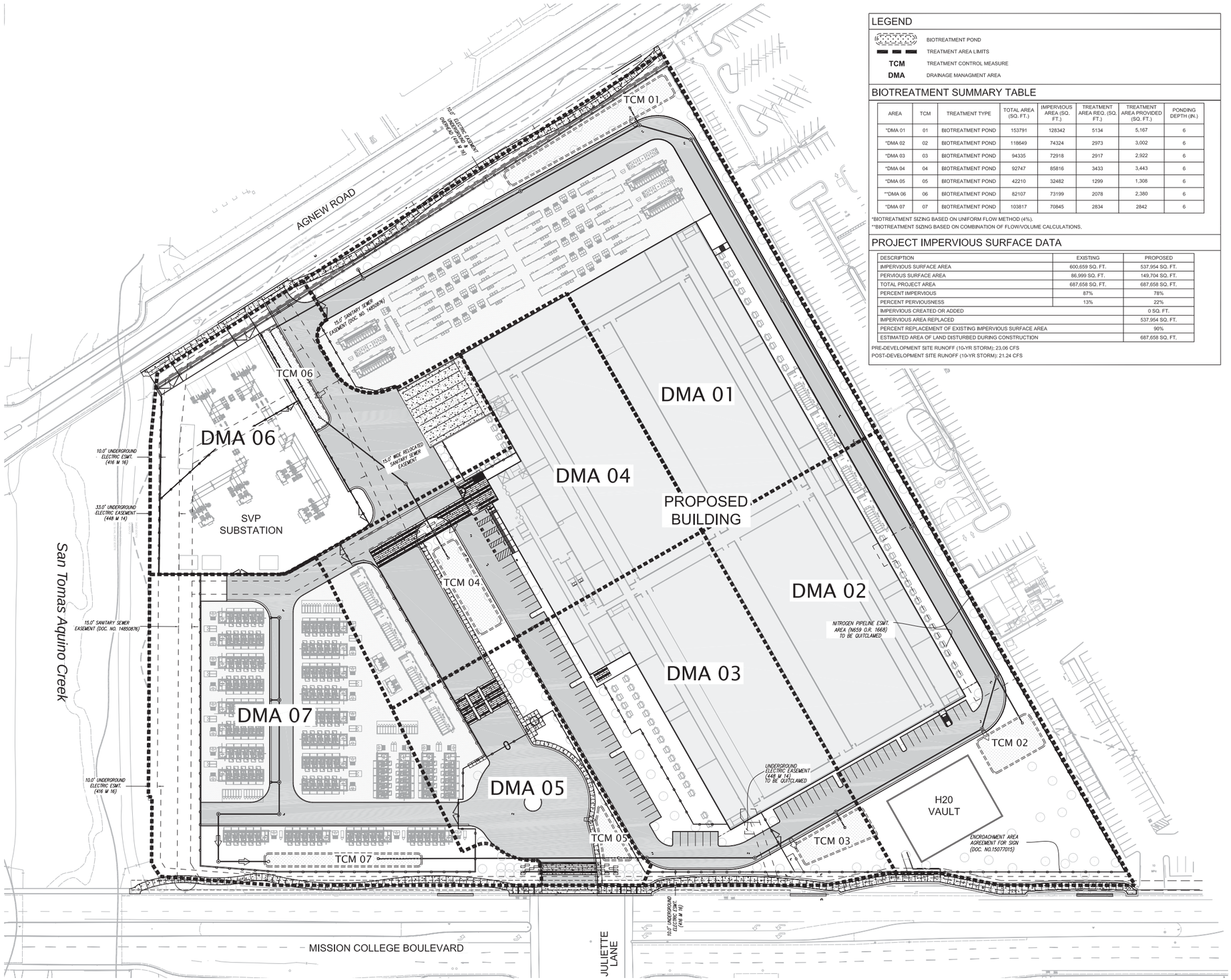
SITE PLAN

FIGURE 3.0-1



BUILDING ELEVATIONS

FIGURE 3.0-2



LEGEND

	BIOTREATMENT POND
	TREATMENT AREA LIMITS
TCM	TREATMENT CONTROL MEASURE
DMA	DRAINAGE MANAGMENT AREA

BIOTREATMENT SUMMARY TABLE

AREA	TCM	TREATMENT TYPE	TOTAL AREA (SQ. FT.)	IMPERVIOUS AREA (SQ. FT.)	TREATMENT AREA REQ. (SQ. FT.)	TREATMENT AREA PROVIDED (SQ. FT.)	PONDING DEPTH (IN.)
*DMA 01	01	BIOTREATMENT POND	153791	128342	5134	5,167	6
*DMA 02	02	BIOTREATMENT POND	118649	74324	2973	3,002	6
*DMA 03	03	BIOTREATMENT POND	94335	72918	2917	2,922	6
*DMA 04	04	BIOTREATMENT POND	92747	85816	3433	3,443	6
*DMA 05	05	BIOTREATMENT POND	42210	32482	1299	1,308	6
**DMA 06	06	BIOTREATMENT POND	82107	73199	2078	2,380	6
*DMA 07	07	BIOTREATMENT POND	103817	70845	2834	2842	6

*BIOTREATMENT SIZING BASED ON UNIFORM FLOW METHOD (4%).
**BIOTREATMENT SIZING BASED ON COMBINATION OF FLOW/VOLUME CALCULATIONS.

PROJECT IMPERVIOUS SURFACE DATA

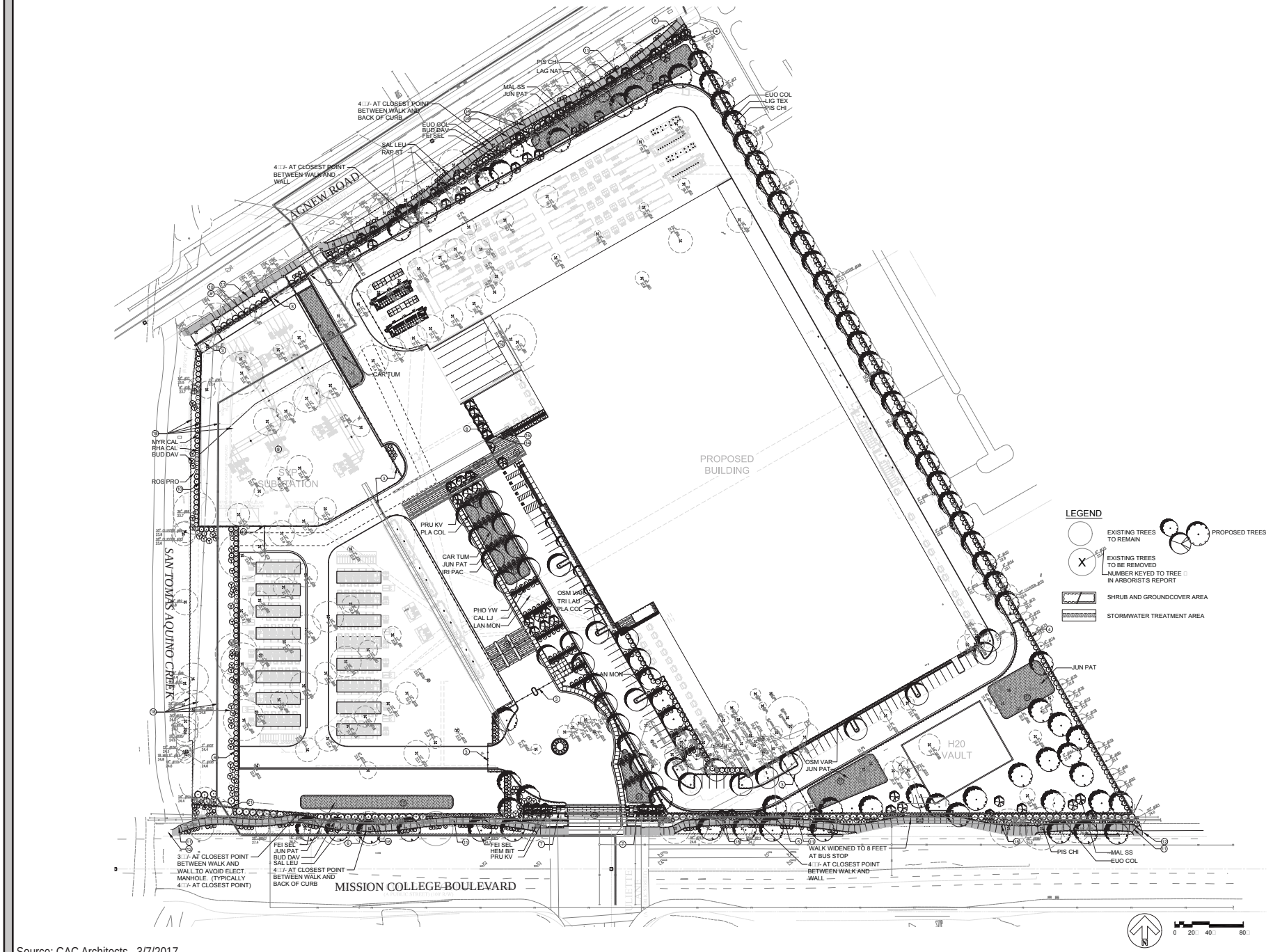
DESCRIPTION	EXISTING	PROPOSED
IMPERVIOUS SURFACE AREA	600,659 SQ. FT.	537,954 SQ. FT.
PERVIOUS SURFACE AREA	86,999 SQ. FT.	149,704 SQ. FT.
TOTAL PROJECT AREA	687,658 SQ. FT.	687,658 SQ. FT.
PERCENT IMPERVIOUS	87%	78%
PERCENT PERVIOUSNESS	13%	22%
IMPERVIOUS CREATED OR ADDED		0 SQ. FT.
IMPERVIOUS AREA REPLACED		537,954 SQ. FT.
PERCENT REPLACEMENT OF EXISTING IMPERVIOUS SURFACE AREA		90%
ESTIMATED AREA OF LAND DISTURBED DURING CONSTRUCTION		687,658 SQ. FT.

PRE-DEVELOPMENT SITE RUNOFF (10-YR STORM): 23.06 CFS
POST-DEVELOPMENT SITE RUNOFF (10-YR STORM): 21.24 CFS

Source: CAC ARCHITECTS., 5/9/2017.

STORMWATER CONTROL PLAN

FIGURE 3.0-3



Source: CAC Architects., 3/7/2017.

LANDSCAPE PLAN

FIGURE 3.0-4

SECTION 4.0 ENVIRONMENTAL SETTING, CHECKLIST, AND IMPACT DISCUSSION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1	Aesthetics	4.10	Land Use and Planning
4.2	Agricultural and Forestry Resources	4.11	Mineral Resources
4.3	Air Quality	4.12	Noise and Vibration
4.4	Biological Resources	4.13	Population and Housing
4.5	Cultural Resources	4.14	Public Services
4.6	Geology and Soils	4.15	Recreation
4.7	Greenhouse Gas Emissions	4.16	Transportation/Traffic
4.8	Hazards and Hazardous Materials	4.17	Utilities and Service Systems
4.9	Hydrology and Water Quality	4.18	Mandatory Findings of Significance

The discussion for each environmental subject includes the following subsections:

- **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.

- **Checklist and Discussion of Impacts** – This subsection includes a checklist for determining potential impacts and discusses the project's environmental impact as it relates to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered using an alphanumeric system that identifies the environmental issue. For example, **Impact HAZ-1** denotes the first potentially significant impact discussed in the Hazards and Hazardous Materials section. Mitigation measures are also numbered to correspond to the impact they address. For example, **MM NOI-2.3** refers to the third mitigation measure for the second impact in the Noise section.

- **Conclusion** – This subsection provides a summary of the project's impacts on the resource.

Important Note to the Reader

The California Supreme Court in a December 2015 opinion [*California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal. 4th 369 (No. S 213478)] confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, the evaluation of the significance of project impacts under CEQA in the following sections focuses on impacts of the project on the environment, including whether a project may exacerbate existing environmental hazards.

The City of Santa Clara currently has policies that address existing conditions (e.g., air quality, noise, and hazards) affecting a proposed project, which are also addressed in this section. This is consistent with one of the primary objectives of CEQA and this document, which is to provide objective information to decision-makers and the public regarding a project as a whole. The CEQA Guidelines and the courts are clear that a CEQA document (e.g., EIR or Initial Study) can include information of interest even if such information is not an "environmental impact" as defined by CEQA.

Therefore, where applicable, in addition to describing the impacts of the project on the environment, this chapter will discuss Planning Considerations that relate to policies pertaining to existing conditions. Such examples include, but are not limited to, locating a project near sources of air emissions that can pose a health risk, in a floodplain, in a geologic hazard zone, in a high noise environment, or on/adjacent to sites involving hazardous substances.

4.1 AESTHETICS

4.1.1 Environmental Setting

4.1.1.1 *Existing Conditions on the Site*

The project site is currently developed with a two-story, 358,000 sf office/R&D building, and an associated employee parking lot. The building facades are primarily stucco with regularly spaced reflective glass windows. The main entrance to the building is located on the southern side of the structure facing Mission College Boulevard and is composed primarily of large, reflective windows. Trees and ornamental landscaping are located throughout the parking lot in landscaped islands and along the property boundaries.

The site is within a fully developed area in Santa Clara. The topography is flat and views of the eastern foothills from public view points are partially blocked by existing industrial and commercial structures in the area.

4.1.1.2 *Surrounding Land Uses*

The project site is located west of Montague Expressway, north of Mission College Boulevard, and south of Agnew Road. With the exception of a multifamily residential development north of the site on Agnew Road, the project area consists primarily of light industrial office and R&D uses. Buildings in the area are similar in height and scale to the existing building on the project site. The Norman Y. Mineta San José International Airport is located approximately 4.6 miles southeast of the site. Aircraft, along with truck and other vehicle traffic, are readily apparent in the area. Views of the project site can be seen in Photos 1-8.

There are no scenic resources on-site, and the site is not visible from a scenic highway. The site is bordered by San Tomas Aquino Creek to the west, and is visible form the San Tomas Aquino Creek Trail, which runs along the western side of the creek.

Photo 1: View of existing building and parking lot from sidewalk on Mission College Boulevard, facing east.

Photo 2: View of existing building from driveway entrance on Mission College Boulevard, facing east.

Photo 3: View of south side of project site and adjacent property (to the right).

Photo 4: View of driveway entrance from Agnew Road, facing east.

Photo 5: View of east side of the building, from driveway entrance on Agnew Road.

Photo 6: View of the north side of the existing building from the parking lot.

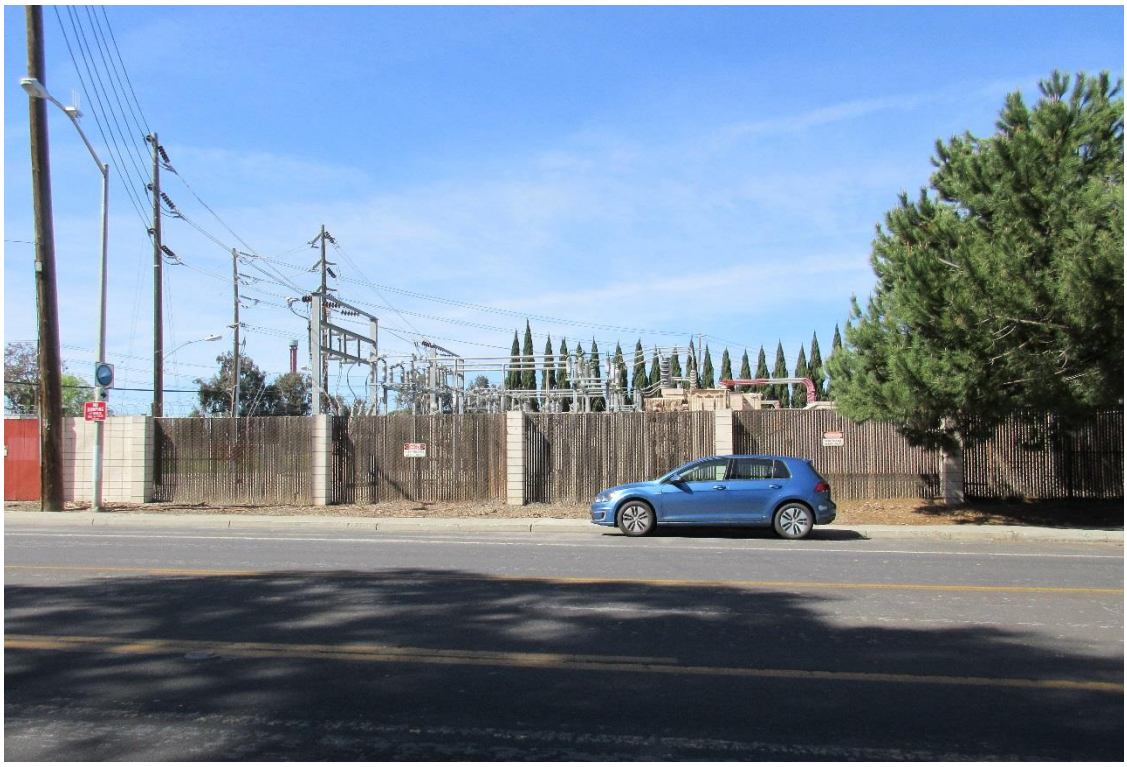


Photo 7: View of substation across Agnew Road, facing east.

Photo 8: View of Santa Clara Valley Water District maintenance road along western property line, looking north.

4.1.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	1,2
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	1,2
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	1,2
d) Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	☐	☐	☒	☐	1,2

4.1.3 Aesthetics Impacts

Aesthetic values are very subjective. Opinions as to what constitutes a degradation of visual character will differ among individuals. One of the best methods for assessing what constitutes a visually acceptable standard for new buildings are the City's design standards and implementation of those standards through the City's design process. The following discussion addresses the proposed changes to the visual setting of the project area and factors that are part of the community's assessment of the aesthetic values of a project's design.

4.1.3.1 *Visual and Aesthetic Impacts*

The proposed project would demolish the existing improvements on-site and construct a two-story 495,610 sf data center along with associated equipment yards and paved parking areas. The building would be approximately 70-feet tall at the top of the screening parapet. The central portion of the eastern and western facades of the building would include mezzanine areas consisting of large glass panels extending from the ground floor to the ceilings of each of the levels. The remainder of the building would be largely devoid of windows, consisting of decorative metal facades with an industrial appearance.

Landscaping consisting of trees, shrubs, and groundcover would be planted throughout the site, including along the building's perimeter, along property boundaries, and parallel to the main driveway aisle entrance on Mission College Boulevard.

Combination masonry and metal walls would be located around the entire perimeter of the generator yard in the southeastern portion of the site, and along the northern and eastern perimeters of the electrical and backup battery equipment yard in the northern portion of the site. The wall around the generator yard would be 21 feet tall except along the western perimeter, where it would be 26 feet tall. The wall associated with the electrical and backup battery equipment yard would be 16 feet tall. These walls would be designed to be similar in appearance to the facades of the proposed data center

building to provide aesthetic continuity throughout the site. An additional 13-foot tall concrete masonry wall would be located around the perimeter of the proposed substation in the northwestern portion of the site. The proposed walls would provide visual screening to surrounding land uses of the mechanical equipment that would be located in the interior of the site.

The project would raise the elevation of the site, remove perimeter vegetation, and construct a building of greater mass than the existing development on the site. There would be a change from a two-story office/R&D building to a larger structure bordered by equipment yards with screening walls. Though larger in mass and scale, development on the site would remain industrial in character. The proposed structures on the site would be similar in scale to the nearby development. The exterior of the building and the proposed screening walls would be subject to the City's design review process and would conform to current architectural and landscaping standards. The project, therefore, would not degrade the existing visual character or quality of the site and its surroundings. **(Less Than Significant Impact)**

4.1.3.2 *Light and Glare*

The project would include outdoor security lighting on the site, and along the building and driveway entrances. The outside lighting would comply with the City's lighting requirements (City Code Section 18.48.140) and would be comparable in brightness to the ambient lighting in the surrounding area. Additionally, outdoor lighting would be angled downward and would include light visors and light hoods. The outdoor lighting would not result in increased ambient light levels along San Tomas Aquino Creek. The exterior surfaces of the building would not be a significant source of glare during daytime hours.

Building materials and lighting plans would be reviewed by the City's Architectural Committee and the Planning Division staff prior to issuance of building permits to ensure that the project would not create a substantial new source of light or glare for nearby residences or spillover into the adjacent San Tomas Aquino Creek corridor. The project, therefore, would not create a new source of substantial light or glare or would adversely affect day or nighttime views in the area. **(Less Than Significant Impact)**

4.1.3.3 *Other Visual Impacts*

The project site is not located within the vicinity of a scenic vista and does not contain scenic resources. As previously described, the site is visible from the San Tomas Aquino Creek Trail located to the west of the site. Although the project would replace an existing two story building on the site with a building of similar scale, the screening walls proposed on the western boundary of the site would range from 13 to 26 feet in height and would alter views of the project site from the trail. The proposed walls are similar in scale to existing development along the trail in the project vicinity, which includes multi-story office buildings and parking garages. Trees and landscaping would be planted in front of the proposed walls to soften their appearance from the trail. Installation of landscaping would enhance the visual quality of the site. As noted previously, there are no scenic vistas or scenic resources on or near the site and, therefore, project implementation would not result in an impact to a scenic vista or resource. **(No Impact)**

4.1.4 Conclusion

The proposed project would not result in significant, adverse visual or aesthetic impacts. **(Less Than Significant Impact)**

4.2 AGRICULTURAL AND FORESTRY RESOURCES

4.2.1 Environmental Setting

According to the Santa Clara County Important Farmland 2014 Map, the project site is designated as *Urban and Built-Up Land. Urban and Built-Up Land* is defined as residential land with a density of at least six units per 10-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment, and water control structures.[1]

4.2.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	1,2
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	1,2
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒	1,2
d) Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	1,2
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒	1,2

4.2.2.1 *Agricultural and Forestry Resources Impacts*

The project site is not currently used for agricultural purposes and is not designated as farmland or forestland. For these reasons, the proposed project would not result in a significant impact on agricultural and forest resources. **(No Impact)**

[1] California Department of Conservation, *Santa Clara County Important Farmland Map 2017*. October 2016. Available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/scl14.pdf

4.2.3 Conclusion

The proposed project would not result in impacts to agricultural or forestry resources. **(No Impact)**

4.3 AIR QUALITY

The following discussion is based, in part, on an Air Quality Analysis prepared by *Illingworth & Rodkin, Inc.* in April 2017. The report is attached as Appendix A of this Initial Study.

4.3.1 Environmental Setting

4.3.1.1 *Regulatory Framework*

Federal and State

Air Quality Overview

Federal, state, and regional agencies regulate air quality in the San Francisco Bay Area Air Basin, within which the proposed project is located. At the federal level, the US Environmental Protection Agency (EPA) is responsible for overseeing implementation of the federal Clean Air Act and its subsequent amendments. The California Air Resources Board (CARB) is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act.

Regional and Local Criteria Pollutants

The federal Clean Air Act requires the US EPA to set national ambient air quality standards for six common air pollutants (referred to as "criteria pollutants"): particulate matter (PM), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. The US EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate.

Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. "Attainment" status for a pollutant means that a given Air District meets the standard set by the US EPA and/or CARB. The Bay Area as a whole does not meet state or federal ambient air quality standards for ground level ozone and fine particulate matter ($PM_{2.5}$), nor does it meet state standards for respirable particulate matter (PM_{10}). The Bay Area is considered in attainment or unclassified for all other pollutants.

Toxic Air Contaminants and Fine Particulate Matter (Local Community Risks)

Besides criteria pollutants, there is another group of substances found in ambient air referred to as Toxic Air Contaminants (TACs). These contaminants tend to be localized and are found in relatively low concentrations in ambient air; however, exposure to low concentrations over long periods can result in increased risk of cancer and/or adverse health effects. TACs are primarily regulated through state and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). Diesel exhaust, in the form of diesel particulate matter (DPM), is the predominant TAC in urban air and accounts for roughly 60 percent of the total cancer risk associated with TACs in the Bay Area. Other TACs found in urban air include lead, benzene and formaldehyde.

Fine Particulate Matter ($PM_{2.5}$) is a complex mixture of substances that includes elements such as carbon and metals, compounds such as nitrates, organics, and sulfates, and mixtures such as diesel exhaust and wood smoke. Because of their small size (particles are less than 2.5 micrometers in diameter), $PM_{2.5}$ can lodge deeply into the lungs. According to the Bay Area Air Quality Management District (BAAQMD), $PM_{2.5}$ is the air pollutant most harmful to the health of Bay Area residents.

Common stationary sources of TACs and $PM_{2.5}$ include gasoline stations, dry cleaners, and diesel backup generators. The other more significant, common mobile source is motor vehicles on roadways and freeways. Unlike regional criteria pollutants, local risks associated with TACs and $PM_{2.5}$ are evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Regional

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. BAAQMD has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents, and develops regulations that must be consistent with or more stringent than, federal and state air quality laws and regulations.

Regional air quality management districts such as BAAQMD must prepare air quality plans specifying how state air quality standards would be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two closely-related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the plan describes how the BAAQMD will continue its progress toward attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities.

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

Sensitive Receptors

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, school playgrounds, child-care centers, retirement homes, convalescent homes, hospitals and medical clinics. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. The nearest sensitive receptors are the residences located across Agnew Road, approximately 115 feet north of the site and approximately 630 feet from the generator yard.

4.3.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	1,2,5
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐	1,2,5
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	☐	☒	☐	☐	1,2,5
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	1,2,5
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	1,2,5

4.3.2.1 *Significance Thresholds*

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the Lead Agency and must be based to the extent possible on scientific and factual data. The City of Santa Clara and other Lead Agencies in the San Francisco Bay Area Air Basin often utilize the thresholds and methodology for assessing air emissions and/or health effects adopted by BAAQMD based upon the scientific and other factual data prepared by BAAQMD in developing those thresholds.

In December 2010, the California Building Industry Association (BIA) filed a lawsuit in Alameda County Superior Court challenging TACs and $PM_{2.5}$ thresholds adopted by BAAQMD in its 2010 CEQA Air Quality Guidelines (California Building Industry Association v. Bay Area Air Quality Management District, Alameda County Superior Court Case No. RG10548693). One of the identified concerns is inhibiting infill and smart growth in the urbanized Bay Area. On March 5, 2012, the Superior Court found that the adoption of thresholds by the BAAQMD in its CEQA Air Quality Guidelines is a CEQA project and BAAQMD is not to disseminate officially sanctioned air quality thresholds of significance until BAAQMD fully complies with CEQA. On August 13, 2013, the 1st District Court of Appeal reversed the trial court opinion, and held that the adoption of thresholds of significance pursuant to CEQA Guidelines Section 15064.7 was not itself a "project" requiring CEQA review, and determined that BAAQMD's thresholds of significance are legally valid. On November 26, 2013, the California Supreme Court granted limited review of the case, and on December 17, 2015 filed an opinion that reversed a limited portion of the Court of Appeal's decision. The legal status of the thresholds remains uncertain.

The City understands the effect of the lawsuit to be that BAAQMD may eventually prepare an environmental review document before BAAQMD adopts the same or revised thresholds. However, the ruling in the case does not equate to a finding that the quantitative metrics in the BAAQMD thresholds are incorrect or unreliable for meeting goals in the Bay Area 2010 Clean Air Plan. Moreover, as noted above, the determination of whether a project may have a significant effect on the environment is subject to the discretion of each Lead Agency, based upon substantial evidence. Notwithstanding the BIA lawsuit, which has no binding or preclusive effect on the City of Santa Clara's discretion to decide on the appropriate thresholds to use for determining the significance of air quality impacts, the City has carefully considered the thresholds previously prepared by BAAQMD and regards the thresholds listed below to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. The City has applied these thresholds consistently in all of its environmental documents in the last several years. Evidence supporting these thresholds has been presented in the following documents:

- BAAQMD. *Thresholds Options and Justification Report*. 2009.
- BAAQMD. *CEQA Air Quality Guidelines.* May 2011. (Appendix D).
- California Air Pollution Control Officers Association (CAPCOA). *Health Risk Assessments for Proposed Land Use Projects*. 2009.
- California Environmental Protection Agency, California Air Resources Board (CARB). *Air Quality and Land Use Handbook: A Community Health Perspective*. 2005.

The analysis in this Initial Study is based upon the general methodologies in the most recent BAAQMD CEQA Air Quality Guidelines (dated May 2012) and numeric thresholds for the San Francisco Bay Basin, including the thresholds listed in Table 4.3-1.

Table 4.3-1
Thresholds of Significance Used in Air Quality Analyses

Pollutant	Construction	Operation-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
ROG, NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hr) or 20.0 ppm (1-hr)	
Fugitive Dust (PM_{10}/$PM_{2.5}$)	BMPs	Not Applicable	Not Applicable

Table 4.3-1 Thresholds of Significance Used in Air Quality Analyses			
Pollutant	**Construction**	**Operation-Related**	
	Average Daily Emissions (pounds/day)	**Average Daily Emissions (pounds/day)**	**Maximum Annual Emissions (tons/year)**
Risk and Hazards for New Sources and Receptors (Project)	Same as Operational Threshold	• Increased cancer risk of >10.0 in one million • Increased non-cancer risk of > 1.0 Hazard Index (chronic or acute) • Ambient $PM_{2.5}$ increase: > 0.3 μ/m^3 [Zone of influence: 1,000-foot radius from property line of source or receptor]	
Risk and Hazards for New Sources and Receptors (Cumulative)	Same as Operational Threshold	• Increased cancer risk of >100 in one million • Increased non-cancer risk of > 10.0 Hazard Index (chronic or acute) • Ambient $PM_{2.5}$ increase: > 0.8 μ/m^3 [Zone of influence: 1,000-foot radius from property line of source or receptor]	
Odors		Five confirmed complaints per year averaged over three years	
Sources: *BAAQMD Thresholds Options and Justification Report (2009)* and *BAAQMD CEQA Air Quality Guidelines* (dated May 2011).			

4.3.2.2 *Clean Air Plan Consistency*

The most recent adopted clean air plan is the 2017 CAP. The 2017 CAP defines an integrated, multipollutant control strategy to reduce emissions of particulate matter, TACs, ozone precursors and GHGs.

The 2017 CAP includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. The control measures are divided into five categories that include:

- Measures to reduce emissions from stationary and area sources;
- Mobile source measures;
- Transportation control measures;
- Land use and local impact measures; and
- Energy and climate measures

Stationary equipment to be installed on the project site will be subject to the permit requirements of BAAQMD, which incorporate BAAQMD measures to reduce emissions from stationary sources

such as the diesel-fueled emergency backup generators. Emissions of non-attainment air pollutants from the proposed project are addressed in *Sections 4.3.2.3 and 4.3.2.4*. Additionally, exposure of sensitive receptors to TAC and $PM_{2.5}$ emissions associated with the project is addressed in *Section 4.3.2.5*. As noted in these sections, the project will result in air quality impacts that are less than significant with the incorporation of mitigation and standard measures, will not conflict with measures in the 2017 CAP to reduce air pollutant emissions, and will not affect forecasts used for Clean Air Plan projections.

In addition, the TDM program is a City requirement pursuant to General Plan policy 5.8.5-P1, which is consistent with the measures within the 2017 Plan. For a low intensity Office R&D designation, City policy requires new developments to reduce VMT by 25 percent. In addition, the City further requires a minimum 10 percent VMT reduction through implementation of a TDM. The TDM measures proposed by the project include promoting alternative modes of transportation with on-site incentives such as secure bicycle parking and dedicated parking spaces for low-emissions vehicles. An annual report outlining the performance of the TDM program would be submitted to the Planning Division. Because the project would be required to implement a TDM program as a condition of approval, and is within proximity to existing transit and services, it would not conflict with implementation of the 2017 Plan.

Therefore, the project would not conflict with implementation of the 2017 CAP. **(Less than Significant Impact)**

4.3.2.3 *Construction Impacts of the Project*

Construction Criteria Pollutant Emissions

The project site is 15.7-acres in size. Demolition of the existing building and associated parking lot would involve several construction phases including: demolition, site preparation, grading/excavation, trenching, exterior building construction, interior building construction, and paving. Project construction is anticipated to occur over roughly 15 months. Criteria pollutant emissions from project construction are listed in Table 4.3-2.

Table 4.3-2
Construction Criteria Pollutant Emissions

Description	ROG Emissions	NOx Emissions	PM_{10} Exhaust Emissions	$PM_{2.5}$ Exhaust Emissions
Daily Project Emissions	19 lbs/day	75 lbs/day	3 lbs/day	3 lbs/day
Threshold	*54 lbs/day*	*54 lbs/day*	*82 lbs/day*	*54 lbs/day*
Significant?	No	**Yes**	No	No

Note:
Average daily emissions were computed by dividing total construction emissions by the number of workdays.

Impact AIR-1: The project would result in significant emissions of NO_x during construction. **(Significant Impact)**

Mitigation Measures:

MM AIR-1: The project shall develop a plan demonstrating that the off-road equipment (more than 25 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 28 percent NO_x reduction and 70 percent PM reduction compared to the CalEEMod modeled average used in the air quality report prepared for the project. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. The following are feasible methods:

- All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet US EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 2 verifiable diesel emission control devices that altogether achieve an 85 percent reduction in particulate matter exhaust; alternatively (or in combination)
- Use of diesel construction equipment that meets US EPA Tier 4 interim emission standards.

Additionally, the project shall provide electric line power to the site during the early phases of construction to minimize the use of diesel powered stationary equipment, such as generators.

Implementation of Mitigation Measures MM AIR-1 would reduce overall NO_x emissions during construction by 32 percent to an average of 51 pounds per day, which is below the threshold of significance of 54 pounds per day. **(Less Than Significant impact with Mitigation)**

Construction Fugitive Dust

During grading and construction activities, dust would be generated. Most of the dust would result during and grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions and meteorological conditions. Nearby areas could be adversely affected by dust generated during construction activities. Nearby land uses are primarily commercial and office uses that are separated by roadways or open areas.

Standard Measures:

The following standard measures will be implemented during construction to control dust and during construction:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

- All vehicle speeds on unpaved roads shall be limited to 15 mph.

- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five 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.

- Install construction screening around the perimeter of the project site.

- Post a publicly visible sign with the telephone number and person to contact at the construction firm regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph and visible dust extends beyond site boundaries.

- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have, at maximum, 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

- Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) Site accesses to a distance of 100 feet from public paved roads shall be treated with a six to 12 inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment of prior to leaving the site.

- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- Minimizing the idling time of diesel powered construction equipment in two minutes.

Implementation of the standard measures listed above would reduce construction dust impacts to a less than significant level. **(Less Than Significant Impact)**

4.3.2.4 *Operational-Related Impacts from the Project*

The primary emission sources associated with operation of the proposed project would include testing or maintenance of the 120 diesel-fueled emergency backup generators. There would be minor emissions from traffic and area sources associated with operation of the data center facilities. Additionally, there would be minor evaporative emission of ROG from the twenty-four 10,000 gallon aboveground diesel storage tanks, one beneath each block of five generators. Emissions from these sources are described below.

Area and Mobile Source Emissions

The area and mobile emissions associated with the project were computed using the CalEEMod model. The project would generate about 55 daily trips, assumed to occur seven days per week and 365 days per year. There would also be area source emissions associated with normal facility operation and maintenance.

Emergency Generator Emissions

The proposed project would install 120 diesel-fueled 625-kW emergency generators equipped with diesel-fueled engines. These engines would not be operated other than for periodic testing and maintenance requirements during normal facility operation. The generator engines would be fueled using ultra low sulfur diesel fuel with a maximum sulfur content of 15 ppm. The diesel engines would meet US EPA Tier 4 emission standards that apply to NO_x and particulate matter emissions. The generators would be located within a generator yard west of the data center building, setback approximately 90 feet from the top of bank of San Tomas Aquino Creek.

The operation of these generators is limited to 50 hours per year of non-emergency use (i.e. testing and maintenance) by the State's Air Toxic Control Measure for Stationary Compression Ignition

Engines.[2] To determine the maximum impact scenario for the project, this air quality assessment analyzed a scenario where all 120 emergency generators would be tested simultaneously one day per month at full load. The testing would take place between the hours of 7:00 AM to 10:00 PM. Generator engine operation under normal conditions is expected to be about 12 hours per year, per engine. Engine operation, however, may occur more frequently due to increased testing or maintenance requirements. For purposes of estimating emissions and potential air quality impacts from the engines, it was assumed that each engine would be operated at full load (100 percent engine load) for 50 hours per year (maximum operation hours allowed by the State's Air Toxic Control Measure and BAAQMD for testing and maintenance). The emissions are shown in Table 4.3-3.

Table 4.3-3
Daily and Annual Emissions from Emergency Generators

Pollutant	Daily Emissions[a] All 120 Units (lb/day)	Total Annual Emissions[b] (ton/year)
NOx	57.0	1.4
ROG	0.6	0.0
CO	16.6	0.4
PM_{10}	3.3	0.08
$PM_{2.5}$	2.5	0.06
SO_2	1.0	0.03

Notes:
[a] Assumes operation of all engines at 100% engine load in a single day.
[b] Assumes operation at 100% engine load for 50 hours/year per engine.

Diesel Fuel Storage Emissions

Diesel fuel for each emergency generator would be stored in twenty-four 10,000 gallon sub-base tanks of the generator housing units (five generators per housing unit). Diesel fuel has a very low volatility and emissions of ROG from fuel storage are expected to be negligible.

Total Project Emissions

Total daily and annual emissions from the emergency generators, mobile and area sources are summarized in Table 4.3-4. In a scenario where each generator is operated for 50 hours per year, total increased daily emissions from operation of the project are estimated to be above the average daily emission significance thresholds established by BAAQMD for NOx.

Table 4.3-4
Summary of Operational Average Daily Emissions (lb/day)

Emission Source	NOx	ROG	PM_{10}	$PM_{2.5}$
Emergency Generators	57.0	.6	3.3	2.5
Mobile & Area Sources	3.3	10.1	0.6	0.3
Total	**60.3**	10.7	3.9	2.8
BAAQMD Threshold	*54*	*54*	*82*	*54*
Significant?	**Yes**	No	No	No

[2] Section 93115, title 17, California Code of Regulations.

Impact AIR-2: Operation of the proposed project could result in significant NOx emissions. **(Significant Impact)**

Mitigation Measures:

MM AIR-2: Generator operation for maintenance and testing purposes shall be limited so that the combined operation of all engines does not exceed 100 hours per day in total.

Implementation of the MM AIR-2, would result in average daily total project NO_x emissions of 51 pounds per day, which would not exceed the significance threshold of 54 pounds per day. **(Less Than Significant Impact with Mitigation Incorporated)**

4.3.2.5 *Local Community Risk and Hazards Impacts to Sensitive Receptors*

The project would be a source of air pollutant emissions during project construction and from operation of emergency generators for testing and maintenance purposes. These generators are diesel-fueled, emitting diesel particulate matter (DPM), which is a TAC. The generators are also a source of $PM_{2.5}$, which has known adverse health effects. Construction of the proposed data center and substation would be a source of TAC and $PM_{2.5}$ emissions.

The BAAQMD CEQA Air Quality Guidelines considers exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. For cancer risk, the BAAQMD considers an increased risk of contracting cancer that is greater than 10.0 in one million to be significant for a single source. For cumulative exposure to TACs from existing sources affecting a sensitive receptor, in addition to a proposed new source, the BAAQMD considers an increased risk of contracting cancer that is greater than 100 in one million to be significant. The BAAQMD CEQA Guidelines also consider exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 micrograms per cubic meter ($\mu g/m^3$) from a single source to be significant and an annual $PM_{2.5}$ concentration that exceed 0.8 $\mu g/m^3$ from cumulative sources to be significant.

The primary community risk impact issues associated with construction emissions and operation of the data center emergency generators are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust from construction activities and operation of emergency generators pose both a potential health and nuisance impact to nearby receptors. Community health risk impacts to sensitive receptors from construction and operational activities were evaluated by predicting potential DPM and $PM_{2.5}$ exposures to off-site sensitive receptors and then calculating increased lifetime cancer risks and non-cancer health effects. DPM and $PM_{2.5}$ emissions from construction and for operation of the data center emergency generators were calculated and dispersion modeling conducted to predict the off-site concentrations so that lifetime cancer risks and non-cancer health effects could be evaluated.

Community Risk – Health Risks and Hazards

Construction Health Impacts

Construction of the data center would expose sensitive receptors in the project area to DPM from construction-related activities. Sensitive receptors in the data center area are the existing nearby off-

site residences. The closest existing residences to the data center site are located north of the site across Agnew Road. A health risk assessment of the project's construction activities was conducted that evaluated potential health effects at nearby sensitive receptors from construction DPM emissions.

Project construction is expected to occur over an approximate 15-month period starting in 2017. The CalEEMod model provided annual $PM_{2.5}$ exhaust emissions (assumed to be DPM) for each year of construction for the off road construction equipment used and for the exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles). The total DPM emissions over the entire construction period were calculated as 0.469 tons (937 pounds). A trip length of one-half mile was used to represent vehicle travel while at or near the construction site. Fugitive dust $PM_{2.5}$ emissions were also computed and included in this analysis. The model predicts total construction period fugitive $PM_{2.5}$ emissions of 0.607 tons (1,214 pounds).

The US EPA AERMOD dispersion model was used to predict concentration of DPM and $PM_{2.5}$ at existing off-site sensitive receptors in the vicinity of the data center construction site. The AERMOD modeling utilized two area sources to represent the on-site construction emissions, one for exhaust DPM emissions and one for fugitive dust emissions. Emissions were modeled as occurring daily between 7:00 AM to 5:00 PM when the majority of the construction activity involving equipment usage would occur.

Average annual DPM and $PM_{2.5}$ concentrations from construction activities were calculated for the 2017-2018 construction period. The locations of the maximum-modeled concentration are identified in Figure 3 of Appendix A. Based on the maximum modeled DPM and $PM_{2.5}$ concentrations, maximum increased cancer risks and non-cancer health impacts were calculated using BAAQMD recommended methods. Results of the cancer risk, hazards and annual $PM_{2.5}$ concentrations at the maximally affected off-site sensitive receptor (residences on Agnew Road) are presented below.

Table 4.3-5
Maximum Increased Cancer Risk, Hazards and $PM_{2.5}$ from Construction

Sensitive Receptor	Cancer Risk (per million)	$PM_{2.5}$ Concentration (μ/g^3)	Hazard Index (HI)
Off-Site Residential Infant	28.9	0.54	<0.1
Off-Site Residential Adult	0.6	0.54	<0.1
BAAQMD Thresholds	10.0	0.3	1.0
Significant?	**Yes**	**Yes**	No

Results of the health risk assessment indicate that the maximum off-site residential infant cancer risk using standard construction equipment and methods would be 28.9 in one million and the residential adult cancer risk would be 0.6 in one million. The increased cancer risk for an infant would exceed BAAQMD's threshold used for evaluating cancer risk of 10 excess cancer cases per million and would result in a significant impact.

The maximum-modeled annual $PM_{2.5}$ concentration, which is based on combined exhaust and fugitive dust emissions, was 0.54 µg/m3. This annual $PM_{2.5}$ concentration would exceed the BAAQMD significance threshold of 0.3 µg/m3 and would be considered a significant impact.

The maximum computed hazard index based on this DPM concentration is 0.04, which is lower than the BAAQMD significance criterion of a hazard index greater than 1.0 and would result in a less than significant impact.

Impact AIR-3: Project construction would result in cancer risks and $PM_{2.5}$ concentrations in excess of BAAQMD thresholds. **(Significant Impact)**

Mitigation Measures:

Implementation of MM AIR-1 and the standard dust control measures identified above would reduce diesel particulate matter emissions by over 70 percent and fugitive particulate matter emissions by more than 50 percent. With implementation of these measures, the maximum cancer risk, assuming infant exposure, would be 8.1 in one million, and the maximum $PM_{2.5}$ concentration would be 0.018 µg/m^3. **(Less Than Significant Impact with Mitigation Incorporated)**

Project Operation Health Impacts

Potential health impacts from operation of the project's generators for testing and maintenance purposes were evaluated using air quality dispersion modeling and applying BAAQMD recommended health impact calculation methods. DPM concentrations and potential cancer risks from operation of the generators were evaluated at existing residences in the nearby project vicinity of the proposed data center site. The closest receptors to the proposed generators are about 630 feet north of the closest emergency generators at the data center. The maximum average annual off-site DPM concentrations were used to calculate potential increased cancer risks from the project. Average annual DPM concentrations were used as being representative of long-term (30-year) exposures for calculation of cancer risks.

Air quality modeling of annual average DPM concentrations was conducted using the EPA's AERMOD dispersion model. Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing would occur between the hours of 7:00 AM and 10:00 PM and each generator is operated for 50 hours per year. DPM emissions for the proposed emergency generators were calculated based on manufacturer's particulate matter emission factor data for the generator engines exhaust. As a worst-case analysis, each generator was assumed to operate at full load for 50 hours per year.

DPM and $PM_{2.5}$ concentrations were calculated at the locations of existing nearby residences. The same receptor locations used to evaluate construction impacts, discussed above, were used for evaluating impacts from the proposed emergency generators.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations from operation of the generators at the data center was 0.0031 µg/m^3 at a receptor north of the data center project site across Agnew Road. Concentrations at all other existing residential locations would be lower than the maximum

DPM and $PM_{2.5}$ concentrations. The location of the maximum modeled DPM and $PM_{2.5}$ concentrations, and TAC, are shown on Figure 3 in Appendix A.

Based on the maximum modeled DPM and $PM_{2.5}$ concentrations, maximum increased cancer risks and non-cancer health impacts were calculated using BAAQMD recommended methods. Table 4.3-6 shows the maximum predicted community risk levels from the operation of the proposed emergency generators at the data center.

Table 4.3-6
Data Center Operation – Maximum Increased Community Risk Levels

Sensitive Receptor	Cancer Risk (per million)	Maximum Annual $PM_{2.5}$ ($\mu g/m^3$)	Maximum Hazard Index
Off-Site Residence	2.3	< 0.01	< 0.01
BAAQMD Single Source Threshold	10.0	0.3	1.0
Significant?	***No***	***No***	***No***

The maximum increased cancer risk, maximum modeled annual $PM_{2.5}$ concentration, and maximum hazard index from operation of the proposed emergency generators would be below the BAAQMD significance thresholds.

Cumulative TAC and $PM_{2.5}$ Exposure

The project site is affected by several sources of TACs. The effect of cumulative sources plus the project were evaluated at the receptor most affected by the project using BAAMD screening tools. All sources within 1,000 feet of the project site were considered, regardless of their distance from the receptor. Figure 1 in Appendix A shows the location of the stationary sources permitted by BAAQMD. Emissions from vehicular traffic on Mission College Boulevard and Agnew Road were evaluated as part of the assessment.

Table 4.3-6 shows the cancer risk, hazard index, and $PM_{2.5}$ concentrations associated with each source affecting the receptor. The sum of impacts from cumulative sources (i.e., sources within 1,000 feet of the project) would be below the cumulative thresholds used by BAAQMD.

Table 4.3-7
Effects from Cumulative Sources – On-Site Receptors

Sources within 1,000 feet of the Project Site[1]	Maximum Cancer Risk (per million)[2]	Maximum Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index (HI)	Method of Analysis
Unmitigated Project Construction and Operation of Generators	31.2	0.54	<0.01	Refined modeling
Plant No. 9848 – Perkins Elmer, Inc. (1,020 feet)	<3.4	<0.01	<0.01	Stationary source screening cancer risk and modeling $PM_{2.5}$ using emissions data from BAAQMD
Plant No. 17245 – City of Santa Clara, Generator (1,020 feet)	<1.4	0.00	0.00	Stationary source screening levels from BAAQMD adjusted using distance multiplier
Plant No. 17717 – 2350 Mission Inventories, Generators (1,480 feet)	<1.6	0.00	0.00	
Plant No. 18892 – Omni Vision, Generator (550 feet)	0.2	0.00	0.00	
Plant No. 20126 – Intermap Network Services, Generator (1,500 feet)	0.0	0.00	0.00	
Plant No. 17385 – Intermap Network Services, Generator (900 feet)	2.3	0.00	0.00	BAAQMD Roadway Screening adjust for EMFAC2014 and new 2015 OEHHA
Cumulative Sources	48.3	0.75	0.02	
BAAMD Threshold – Cumulative Sources	*100*	*10.0*	*0.8*	
Significant?	*No*	*No*	*No*	

Notes:
[1] See Figure 2 of Appendix A for location of sources
[2] Cumulative source cancer risk adjusted upward by factor of 1.3744 to account for new 2015 OEHHA guidance.

Odors

The project would generate localized emissions of diesel exhaust during construction activities and routine maintenance of emergency generators of the site. Although these emissions may be noticeable from time to time by adjacent receptors, odors would be localized and temporary. The project, therefore, would not create objectionable odors affecting a substantial number of people. **(Less Than Significant Impact)**

4.3.3 Conclusion

With incorporation of MM AIR-1, MM AIR-2, and standard dust control measures, the project would result in a less than significant air quality impact. **(Less Than Significant Impact with Mitigation Incorporation)**

4.4 BIOLOGICAL RESOURCES

The following discussion is based in part on an Arborist Report prepared for the project by *McClenahan Consulting, LLC* in February 2017. A copy of the report is attached to this Initial Study as Appendix B.

4.4.1 Environmental Setting

4.4.1.1 *Regulatory Setting*

Federal And State

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA: 16 USC Section 703 et seq.) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the U.S. Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, which is a violation of the MBTA.

Birds of Prey

Birds of prey, such as owls and hawks, are protected in California under provisions of the state Fish and Game Code, Section 3503.5 (1992), which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season can result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

City of Santa Clara

Santa Clara General Plan

The General Plan includes several land use and conservation policies designed to protect biological resources in the City, specifically riparian habitats and trees. These policies include the following:

Policy 5.3.1-P10: Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal.

Policy 5.10.1-P2: Work with Santa Clara Valley Water District and require that new development follow the "Guidelines and Standards for Lands Near Streams" to protect streams and riparian habitats.

Policy 5.10.1-P4: Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.

Policy 5.10.1-P5: Encourage enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible.

Santa Clara Valley Water Resources Protection Collaborative Guidelines

The City of Santa Clara adopted the *Water Resources Protection Collaborative Guidelines Manual* in 2007. General Plan policy 5.10.1-P2 requires that new development follow the "Guidelines and Standards for Lands Near Streams" to protect streams and riparian habitats, and Policy 5.10.1-P5 encourages enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible. Guides 2 – Use of Local Native Species, 3 – Use of Ornamental or Non-Native Species, 6 – Placement of Fill and Planting of Trees by Levees, 9 – Grading Adjacent to Creeks and SCVWD Right of Way, and 10 – Plant Species for Vegetated Buffers and Swales are applicable to the proposed project.

The Santa Clara Valley Water District (SCVWD) has adopted an ordinance that protects watercourses, creeks, streams, lakes, ponds, and reservoirs. The ordinance requires a project review and permitting process to minimize impacts to watercourses resulting from development or community activities. Any project within 50 feet of any watercourse must first obtain an encroachment permit from SCVWD. The site's western boundary is within 50 feet of San Tomas Aquino Creek. The project, therefore, would be required to obtain an encroachment permit prior to construction activities.

4.4.1.2 *Existing Conditions*

The project site consists of a 358,000 sf office/R&D building and associated employee parking lot. Ornamental landscaping and mature trees are located throughout the parking lot and along the project boundaries.

Wildlife habitats in such developed urban areas are low in species diversity. Species that use the habitat on the site are predominantly urban adapted birds, such as rock doves, mourning doves, house sparrows, finches, and starlings.

Special Status Species

Special status plant and wildlife species are not present on the highly urbanized project site, although raptors (birds of prey) could use the trees on the site for nesting or as a roost. Raptors are protected by the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.).

Trees

Trees located on the project site are primarily non-native species in varying sizes and levels of health. City policy is to protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size and all other trees over 36 inches in circumference (approximately 11 inches in diameter) as measured from 48 inches above the ground surface. Within the boundaries of the proposed modifications, there are a total of 256 trees, 104 of which are considered protected by City of Santa Clara policy. Table 4.4-1 below includes the species and number of species of the trees on the site.

Table 4.4-1: Tree Summary		
Common Name	**Species**	**Number of Trees Present**
American sweet gum	*Liquidambar styraciflua*	6
Aristocrat pear	*Pyrus calleryana 'Aristocrat'*	4
Black acacia	*Acacia melanoxylon*	7
Blue gum	*Eucalyptus globulus*	29
Brisbane box	*Tristania conferta*	1
Canary Island pine	*Pinus canariensis*	1
Carolina cherry	*Prunus caroliniana*	14
Chinese pistache	*Pistacia chinensis*	15
Coast redwood	*Sequoia sempervirens*	4
Crape myrtle	*Lagerstroemia indica*	15
Deodar cedar	*Cedrus deodara*	8
Eucalyptus	*Eucalyptus spp.*	11
European white birch	*Betula pendula*	12
Fan palm	*Washingtonia robusta*	1
Italian cypress	*Cupressus sempervirens*	2
Japanese maple	*Acer palmatum*	2
Leyland cypress	*Cupressocyparis x leylandii*	1
London plane tree	*Platanus x acerifolia*	69
Modesto ash	*Fraxinus velutina 'Modesto'*	6
Myoporum	*Myoporum laetum*	2
Red gum	*Eucalyptus camaldulensis*	8
Red ironbark	*Eucalyptus sideroxylon*	14
Red maple	*Acer rubrum*	6
Silver dollar	*Eucalyptus polyanthemos*	2
Zelkova	*Zelkova serrata*	16
	Total:	256
Source: *McClenahan Consulting, LLC.* Arborist Report. February 20, 2017.		

The City's Design Guidelines also require that mature trees removed or proposed for removal be replaced on-site, at a minimum, with a 24- or 36-inch box. Other standards may apply in cases where particular planting requirements must be met. This includes providing specimen size material for protected trees and installing appropriately sized trees, such as less than or equal to 15 gallons where there are physical limitations.

4.4.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	☐	☒	☐	☐	1,2
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?	☐	☐	☒	☐	1,2
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	1,2
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	☐	☐	☐	☒	1,2
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	1,2,8
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	1,2

4.4.2.1 *Impacts to Habitats*

Riparian habitat is considered a sensitive, natural community by various State and Federal resource agencies and the City of Santa Clara. San Tomas Aquino Creek is located directly west of the project site. The creek has been modified over the years for flood control purposes and supports very limited native riparian vegetation along the creek corridor. General Plan policy 5.10-1-P2, requires new development to follow the SCVWD "Guidelines and Standards for Lands Near Streams". The development guidelines and standards include setback limits, slop stability requirements, restrictions on landscape plants, lighting, and other measures to protect streams and riparian habitats. The

nearest proposed structure of the project site, the 26-foot western wall enclosing the generator yard, would be set back approximately 90 feet from the top of bank.

The project would not remove any native riparian vegetation nor would it degrade existing riparian habitat. Redevelopment of the site would include the installation of new landscaping. Design Guides 2 and 3 provide guidelines for planting native species and for the use of ornamental or non-native landscaping. The use of local native species described in Design Guide 2 is intended for projects establishing or enhancing native habitat and since the project is a redevelopment of an existing site, the landscape plan was selected in part for human aesthetics. The landscape plan has been developed to avoid the use of commonly found invasive species identified in Design Guide 3. Since the project would not plant trees on the SCVWD maintenance road/levee, the project is consistent with Design Guide 6.

The project site is located east of the SCVWD maintenance road at an elevation below and below the levee. The project site currently conveys stormwater runoff into existing stormwater infrastructure and not over the creek banks. The project would not concentrate or convey flows over the creek bank and is consistent with Design Guide 9. Grading and site preparation necessary to complete the project would be completed consistent with the NPDES stormwater permit provisions and would incorporate erosion control and best management practices to reduce the potential for sedimentation. Bioretention basins included in the project consist of the plant species identified in Design Guide 10.

The project does not include any improvements or impacts to San Tomas Aquino Creek or the removal of any riparian vegetation. The project is consistent with the applicable SCVWD guidelines and standards, and the project would have a less than significant impact on adjacent sensitive habitat. **(Less Than Significant Impact)**

4.4.2.2 *Impacts to Special Status Species*

Special-Status Wildlife (Nesting Birds and Raptors)

While the project site is located within an urban environment, the mature trees on-site and on the adjacent properties, including the creek, could provide nesting habitat and/or foraging habitat for raptors and migratory birds. A visual inspection of mature trees located along the site's boundaries with Agnew Road and San Tomas Aquino Creek was completed in May 2017. No raptors or raptor nests were observed during the visual inspection.

Migratory birds like nesting raptors are protected under the Migratory Bird Treaty Act and the California Fish and Game Code Sections 3503, 3503.5, and 2800. Migratory birds, especially raptors, utilize mature trees for nesting and foraging habitat. Although no active nests were observed on or adjacent to the site, the project area is in proximity to the mature trees within the riparian corridor and construction of the proposed project may result in loss of fertile eggs or nestlings, or lead to nest abandonment in raptor habitat.

The California Department of Fish and Wildlife (CDFW)[3] defines "taking" as causing abandonment and/or loss of reproductive efforts through disturbance.

[3] Formally the California Department of Fish and Game.

Impact BIO-1: Construction activities associated with the proposed project could result in the loss of fertile eggs, nesting raptors or other migratory birds, or nest abandonment. **(Significant Impact)**

Mitigation and Avoidance Measures

MM BIO-1.1: The following mitigation and avoidance measures will avoid possible impacts to migratory birds during construction:

- If removal of the trees on-site would take place between January and September, a pre-construction survey for nesting raptors will be conducted by a qualified ornithologist to identify active nesting raptor nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys will be conducted no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys will be conducted no more than thirty (30) days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, the ornithologist shall, in consultation with the State of California, Department of Fish & Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet) around the nest until the end of the nesting activity.

- The applicant shall submit a report indicating the result of the survey and any designated buffer zones to the satisfaction of the Director of Community Development prior to the issuance of a tree removal permit by the City Arborist.

With implementation of **MM BIO-1.1**, potential impacts from the project on nesting birds and protected raptors would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

4.4.2.3 *Impacts to Mature Trees*

The project would remove 234 trees on-site. The project does, however, propose to plant new landscaping around the perimeter of the site, along the street frontage, and near the building. The City's General Plan (Policy 5.3.1-P10) requires new development to include new street trees and at least a 2:1 on- or off-site replacement for removal of existing trees. While the proposed project would need to plant a minimum of 468 trees, the landscape plan shows 199 new trees would be planted on the project site. Species used will be required to exclude invasive species listed in the *Guidelines and Standards for Lands Near Streams.* At the City's directive, the project would plant, at minimum, 269 trees off-site to offset the loss of the trees to be removed as a result of the project. If additional trees are removed, whether due to deterioration, construction injury, or a mitigation measure, the project would need to offset the loss of trees in accordance with General Plan Policy 5.3.1-P10. Because the project would be required to comply with the City's tree replacement policy,

the loss of these trees on-site would result in a less than significant impact on trees in the project area. **(Less than Significant Impact)**

Trees to be retained on-site may be injured during project construction activities including demolition and site grading.

Impact BIO-2: Project construction may result in unintended damage and/or injury to trees to be retained on-site.

Mitigation Measures:

MM BIO-2.1: Barricades – Prior to initiation of construction activity, temporary barricades would be installed around all trees in the construction area. Six-foot high, chain link fences would be mounted on steel posts, driven two feet into the ground, at no more than 10-foot spacing. The fences shall enclose the entire area under the drip line of the trees or as close to the drip line area as practical. These barricades will be placed around individual trees and/or groups of trees.

MM BIO-2.2: Root Pruning (if necessary) – During and upon completion of any trenching/grading operation within a tree's drip line, should any roots greater than one inch in diameter be damaged, broken or severed, root pruning to include flush cutting and sealing of exposed roots should be accomplished under the supervision of a qualified Arborist to minimize root deterioration beyond the soil line within 24 hours.

MM BIO-2.3: Pruning – Pruning of the canopies to include removal of deadwood should be initiated prior to construction operations. Such pruning will provide any necessary construction clearance, will lessen the likelihood or potential for limb breakage, reduce 'windsail' effect and provide an environment suitable for healthy and vigorous growth.

MM BIO-2.4: Fertilization –Fertilization by means of deep root soil injection should be used for trees to be impacted during construction in the spring and summer months.

MM BIO-2.5: Mulch – Mulching with wood chips (maximum depth of three inches) within tree environments should be used to lessen moisture evaporation from soil, protect and encourage adventitious roots and minimize possible soil compaction.

With implementation of **MM BIO-2.1 – 2.5**, the project would result in a less than significant impact to trees on-site. **(Less Than Significant Impact with Mitigation Incorporated)**

4.4.2.4 *Other Biological Impacts*

The project would not directly affect any federally protected wetlands. **(No Impact)**

The project site is not located within an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. **(No Impact)**

4.4.3 Conclusion

With the implementation of identified mitigation measures and tree replacement requirements, impacts to biological resources would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

4.5 CULTURAL RESOURCES

The discussion in this section is based in part upon a Cultural Resources Literature Search prepared for the project by *Holman & Associates, Inc.* in March 2017. A copy of the report is on-file with the City of Santa Clara.

4.5.1 Environmental Setting

Cultural resources are evidence of past human occupation and activity and include both historical and archaeological resources. These resources may be located above ground or underground and have significance in the history, prehistory, architecture, architecture of cultural of the nation, State of California, or local or tribal communities.

Paleontological resources are fossils, the remains or traces of prehistoric life preserved in the geologic record. They range from the well-known and well publicized (such as mammoth and dinosaur bones) to scientifically important fossils.

4.5.1.1 *Regulatory Framework*

City of Santa Clara 2010-2035 General Plan Relevant Cultural Resource Policies

Policy 5.6.3-P5: In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeologist/paleontologist.

Policy 5.6.3-P6: In the event that human remains are discovered, work with the appropriate Native American representative and follow the procedures set forth in the State law.

4.5.1.2 *Existing Conditions*

A records search (File No. 16-1283) was completed at the Northwest Information Center of the California Historical Resources Information System (CHRIS) in February 2017. There are no recorded cultural resources on or within a quarter mile of the project site. The site is, however, located within an archaeologically sensitive area, due to its proximity to San Tomas Aquino Creek.[4] In this area of Santa Clara, Native Americans often used lands adjacent to major creeks and rivers, as well as locations along the edge of the historic bay wetlands near freshwater sources to live, camp, and process resources. Lands adjacent to the Guadalupe River were heavily used by Native Americans. The project site is located adjacent to San Tomas Aquino Creek on the east and approximately 1.4 miles west of the Guadalupe River. Based on the project's proximity to San Tomas Aquino Creek, there is a moderate potential for Native American archaeological deposits or cultural materials within the project area.

Historic-era maps for the project area were examined to identify the potential for prehistoric and historic archaeological resources in the project vicinity. In 1876, the land on which the site is located was owned by A. Agnew as part of his 120-acre parcel. Two houses, a reservoir, and row crops were located in the eastern portion of that parcel by the Alviso and Santa Clara Road (now Lafayette Street) well beyond the project site. By 1899, one residence was located adjacent to San Tomas Aquino Creek set back from Agnew Road within or close to the western edge of the project site. At that time, the creek had not been channelized and still displayed a meandering course. By 1942,

[4] Holman & Associates, Inc. *Cultural Resources Literature Search for the Aligned Data Systems Project at 2305 Mission College Boulevard, City and County of Santa Clara.* March 1, 2017.

most of the project site was planted in orchards with the western portion unimproved. The creek had been channelized with a straighter course. After 1951 and by 1953, the entire site was planted with orchards. After 1961 and by 1968, San Tomas Aquino Creek had undergone additional flood control improvements to its watercourse. By 1980, the orchards were removed and a long narrow building was constructed on the site. By 1993, the current building configuration and parking lot were in place. Since potential historical deposits were likely affected by flood control efforts along the creek to the west, there is a low to moderate possibility of intact historic-era archaeological deposits within the project site.

The existing building on the site was constructed beginning in 1979.[5] The building is less than 50 years old and does not appear to meet the standards to be considered eligible for the California or National Registers and the structure has not been identified by the City of Santa Clara as architecturally or historically significant. There are no historic structures on or adjacent to the project site.

4.5.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☐	☐	☒	1,2,9
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5?	☐	☒	☐	☐	1,2,9
c) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☒	☐	1,2,9
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐	1,2,9
e) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					

[5] WSP. *Phase I Environmental Site Assessment. 2305 Mission College Boulevard – Santa Clara, California.* October 13, 2014.

1.	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or	☐	☐	☐	☒	1,2,9
2.	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying this criteria, the significance of the resource to a California Native American tribe shall be considered.	☐	☐	☐	☒	1,2,9

4.5.2.1 *Buried Prehistoric and Historic Resources*

Subsurface Resources

As described previously, fill would be imported to the site to raise the base elevation by approximately four feet. Excavation for utilities would extend to depths of up to 12 feet below the new base elevation, or eight feet below the current base elevation. Disturbance of native soils would occur during trenching, site grading, and other construction activities. The site has a moderate potential for containing prehistoric archaeological resources due to the proximity of San Tomas Aquino Creek, and a low to moderate potential for containing historic-era archaeological deposits. Grading and other excavation activities on the site could damage as yet unrecorded subsurface resources.

Impact CUL–1: Subsurface cultural resources could be uncovered during construction of the proposed project. **(Significant Impact)**

Mitigation Measures:

The following project-specific mitigation measures would be implemented during construction to avoid significant impacts to unknown subsurface cultural resources:

MM CUL-1.1: After demolition of the existing building and paved parking lot on the site, a qualified archaeologist shall complete mechanical presence/absence testing for archaeological deposits and cultural materials. In the event any prehistoric site indicators are discovered, additional backhoe testing will be conducted to map the aerial extent and depth below the surface of the deposits. In the event prehistoric or historic archaeological deposits are found during presence/absence testing, the significance of the find will be determined. If deemed significant, a Treatment Plan will be prepared and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following:

- Identify scope of work and range of subsurface effects (include location map and development plan),

- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found),

- Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information),

- Detail field strategy used to record, recover, or avoid the finds (photogs, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.

- Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.).

- Report structure, including a technical and layman's report and an outline of document contents in one year of completion of development (provide a draft for review before a final report),

- Disposition of the artifacts,

- Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.

MM CUL-1.2: In the event that prehistoric or historic resources that are not discovered during presence/absence testing are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Community Development will be notified, and the archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits. If the find is deemed significant, a Treatment Plan will be prepared as outlined in MM CUL-1.1

MM CUL-1.3: In the event that human remains are discovered during presence/absence testing or excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

With implementation of mitigation measures MM CUL-1.1 – 1.3, potential project impacts to unknown subsurface cultural resources would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Historic Resources

As mentioned previously, the existing building is less than 50 years old and has not been listed in the City's Historic Resources Inventory. There are no eligible or listed CHRIS or local historic resources on or adjacent to the project site. Implementation of the proposed project would have no impact on any historic resources. **(No Impact)**

Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. Geologic units of Holocene age, such as those found of the floor of the Santa Clara Valley, are generally not considered sensitive for paleontological resources, because biological remains younger than 10,000 years are not usually considered fossils. These sediments have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources. These recent sediments, however, may overlie older Pleistocene sediments with high potential to contain paleontological resources. These older sediments, often found at depths greater than 10 feet below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates. Excavation on-site will not exceed 10 feet in depth below the existing ground surface level. It is improbable that paleontological resources will be discovered on-site due to the distance of the site from the Bay and because no paleontological resources have been discovered in this area of Santa Clara. **(Less Than Significant Impact)**

4.5.3 Conclusion

With implementation of the mitigation measures identified, the project would result in a less than significant impact to cultural resources. **(Less Than Significant Impact with Mitigation Incorporated)**

4.6 GEOLOGY AND SOILS

The following analysis is based in part on a Geotechnical Investigation for the project, prepared by *Cornerstone Earth Group* in January 2016. A copy of this report is attached as Appendix D of this Initial Study.

4.6.1 Environmental Setting

4.6.1.1 *Existing Conditions*

The project site is located in the Santa Clara Valley, a relatively flat alluvial basin, bounded by the Santa Cruz Mountains to the southwest and west, the Diablo Mountain Range to the east, and the San Francisco Bay to the north.

Soil Conditions

The project site is underlain by undocumented fill consisting of clayey sand to a depth of two feet below ground surface (bgs). Below the undocumented fill, soil consists of hard lean clays with some loose to dense layers of silty, clayey, and poorly graded sands. An approximately five-foot thick sandy silt layer is approximately nine feet bgs.

Because the topography of the project area is flat, with elevations ranging from 19 to 25 feet above sea level, erosion hazard is limited and there is no landslide hazard.

Groundwater

Depth to groundwater in the area is approximately eight to 11 feet below ground surface (bgs). Fluctuations in groundwater levels are common due to seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

Seismicity and Seismic Hazards

The San Francisco Bay Area is one of the most seismically active areas in the United States. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities estimates there is a 72 percent chance of at least one magnitude 6.7 earthquake occurring in the Bay Area region between 2002 and 2032. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances. The faults considered capable of generating significant earthquakes in the area are generally associated with the well-defined areas of crustal movement, which trend northwesterly.

The three major faults in the region are the Calaveras Fault (approximately 9.9 miles east of the site) and the San Andreas Fault 11.3 miles west of the site), and the Hayward Fault (approximately 6.3 miles north of the site). The project site is not located within a fault rupture zone.[6]

Ground shaking at the project site is predicted to be strong to very strong as determined by the Association of Bay Area Governments (ABAG). The project site is not located within the limits of

[6] Santa Clara County. *Santa Clara County Geologic Hazard Zones.* October 26, 2012.

an Alquist-Priolo Earthquake Fault Zone and there are no known active faults within the City limits of Santa Clara.

Liquefaction

Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a substantial loss of strength during seismic events. Loose, water-saturated soils are transformed from a solid to a liquid state during ground shaking. Liquefaction can result in significant deformations and ground rupture or sand boils. Soils most susceptible to liquefaction are loose, uniformly graded, saturated, fine-grained sands that lie close to the ground surface. The project site is located within a State-designated Liquefaction Hazard Zone and a Santa Clara County Liquefaction Hazard Zone.[7]

Lateral Spreading

Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open face, such as the steep bank of a stream channel.

San Tomas Aquino Creek is adjacent to the project site to the west. The geotechnical investigation completed for the site concluded that the western portion of the site adjacent to the creek could be susceptible to lateral spreading.

4.6.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
1. Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42.)?	☐	☐	☒	☐	1,2,10
2. Strong seismic ground shaking?	☐	☐	☒	☐	1,2,10
3. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	1,2,10
4. Landslides?	☐	☐	☒	☐	1,2,10
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	1,2,10

[7] CA Department of Conservation. *CGS Seismic Hazard Zone and Liquefaction Map. Santa Clara County*. 2012

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
c) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐	1,2,10
d) Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	☐	☐	☒	☐	1,2,10
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	1,2,10

4.6.2.1 *Existing Geologic Conditions Affecting the Project – Planning Considerations*

The California Supreme Court in a December 2015 opinion (*BIA v. BAAQMD*) confirmed CEQA is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project; nevertheless, the City has policies that address existing conditions (e.g. geologic hazards) affecting a proposed project, which area addressed below.

The policies of the City of Santa Clara 2035 General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. Santa Clara General Plan Policy 5.10-P6 requires that new development is designed to meet current safety standards and implement appropriate building codes to reduce risk associated with geologic conditions.

Seismic Hazards

The project site is not located within a fault rupture zone. The project site is located in a seismically active region. Geologic conditions on the site would require the new building be designed and constructed in accordance with standard engineering techniques and current California Building Code requirements, to avoid or minimize potential damage from seismic shaking and liquefaction on the site.

Soil Hazards

The project site is located in a mapped liquefaction hazard zone, and soils on the site have a high potential for expansion. Additionally, the western portion of the site could be susceptible to lateral spreading due to its proximity to San Tomas Aquino Creek. The site is not located within a landslide hazard zone.

Standard Permit Condition:

To avoid or minimize potential damage from seismic shaking, the project would be built using standard engineering and seismic safety design techniques. Building redevelopment design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which will be included in a report to the City. The report shall be reviewed and approved by the City of Santa Clara's Building Division as part of the building permit review and issuance process. The building shall meet the requirements of applicable Building and Fire Codes, including the 2016 California Building Code, as adopted or updated by the City. The project shall be designed to withstand potential geologic hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

Septic Tanks

The project site is located within an urban area of Santa Clara where sewers are available to dispose wastewater from the project site. Therefore, the project site would not need to support septic tanks or alternative wastewater disposal systems.

4.6.2.2 *Geologic Impacts from the Project*

Erosion

Demolition and construction on the project site would temporarily increase the potential for erosion and sedimentation that could be carried by runoff into San Tomas Aquino Creek and the San Francisco Bay. The project will implement the following measures for avoiding and reducing construction related erosion impacts.

Standard Measures:

- Because this project involves a land disturbance of more than one acre, the project is required to submit a Notice of Intent to the State Water Resources Control Board and to prepare a Storm Water Pollution Prevention Plan (SWPPP) for controlling storm water discharges associated with construction activity.

- This project will be required to prepare and submit an Erosion Control Plan with the Grading and Drainage Plan for review and approval by the Department of Public Works.

- All excavation and grading work will be scheduled in dry weather months or construction sites will be weatherized.

- Stockpiles and excavated soils will be covered with secured tarps or plastic sheeting.

- Ditches will be installed, if necessary, to divert runoff around excavations and graded areas.

With implementation of these measures and compliance with the City's grading ordinance, construction of the proposed project would have a less than significant impact. (**Less Than Significant Impact)**

4.6.3 Conclusion

The proposed project would not result in significant, adverse geology, soils, or seismicity impacts that cannot be avoided through standard engineering and construction techniques. **(Less Than Significant Impact)**

4.7 GREENHOUSE GAS EMISSIONS

4.7.1 Environmental Setting

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of Greenhouse Gases (GHGs) have a broader, global impact. Global warming associated with the "greenhouse effect" is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal GHGs contributing to global warming and associated climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

4.7.1.1 *Regulatory Framework*

Agencies at the International, National, State, and local levels are considering or have adopted strategies to control emissions of GHG that contribute to global warming. Several key plans and policies are described below.

Federal

Clean Air Act

The US EPA is the federal agency responsible for implementing the Clean Air Act (CAA). The US Supreme Court in its 2007 decision in *Massachusetts et al. v. Environmental Protection Agency et al.*, ruled that carbon dioxide (CO_2) is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of greenhouse gases (GHGs). Following the court decision, EPA has taken actions to regulate, monitor, and potentially reduce GHG emissions (primarily mobile emissions).

State

California Global Warming Solutions Act

Under the California Global Warming Solution Act, also known as Assembly Bill 32 (AB 32), CARB has established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHG, and adopted a comprehensive plan, known as the *Climate Change Scoping Plan*, that identifies how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms and other actions.

On September 8, 2016, Governor Brown signed Senate Bill (SB) 32 into law, amending the California Global Warming Solution Act. SB 32 requires the California Air Resources Board to ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030. As a part of this effort, CARB is required to update the *Climate Change Scoping Plan* to express the 2030 target in terms of million metric tons of carbon dioxide equivalent. CARB has initiated the public process to update the State's Climate Change Scoping Plan. The updated Scoping Plan will provide a framework for achieving the 2030 target and is anticipated to be completed and adopted by the Air Resources Board in June 2017.

Senate Bill 375 – Redesigning Communities to Reduce Greenhouse Gases

Senate Bill 375 (SB 375), known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. It builds on AB 32 by requiring CARB to develop regional GHG reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035 when compared to emissions in 2005. The per capita reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.[8]

Consistent with the requirements of SB 375, MTC partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission (BCDC) to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) process.[9] The SCS is referred to as *Plan Bay Area*.

MTC and ABAG adopted Plan Bay Area in July 2013 and CARB accepted the technical evaluation of the SCS in April 2014. The strategies in the plan are intended to promote compact, mixed-use development close to public transit, jobs, schools, shopping, parks, recreation, and other amenities, particularly within Priority Development Areas (PDAs) identified by local jurisdictions. The site is not within a PDA.

California Senate Bill 350 (Renewable Energy Targets)

On October 7, 2015, California Governor Jerry Brown signed Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act of 2015 into law, which calls for adoption of regulations to increase from 33 percent to 50 percent, the procurement of electricity from renewable sources by 2030. SB 350 also requires establishment of annual targets for statewide energy efficiency savings and demand reduction by November 1, 2017. These energy efficiency savings and demand reductions will be designed to achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas use by January 1, 2030.

Regional

Bay Area Air Quality Management District

BAAQMD is the regional, government agency that regulates sources of air pollution within the nine San Francisco Bay Area counties. Several key activities of BAAQMD related to GHG emissions are described below.

- *Regional Clean Air Plans*: BAAQMD and other agencies prepare clean air plans as required under the state and federal Clean Air Acts. The Bay Area 2017 Clean Air Plan (2017 CAP) focuses on two closely-related BAAQMD goals: protecting public health and protecting the climate. Consistent with the GHG reduction targets adopted by the state of California, the

[8] The emission reduction targets are for those associated with land use and transportation strategies, only. Emission reductions due to the California Low Carbon Fuel Standards or Pavley emission control standards are not included in the targets.
[9] ABAG, BAAQMD, BCDC, and MTC. "One Bay Area Frequently Asked Questions." Accessed: July 25, 2017. Available at: http://onebayarea.org/about/faq.html#.UQceKR2_DAk

2017 CAP lays the groundwork for the BAAQMD's long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The 2017 CAP includes a wide range of control measures designed to decrease 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* are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. As discussed in the CEQA Guidelines, the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Santa Clara and other jurisdictions in the San Francisco Bay Area Air Basin often utilize the thresholds and methodology for greenhouse gas emissions developed by the BAAQMD. The Guidelines include information on legal requirements, BAAQMD rules, plans and procedures, methods of analyzing greenhouse gas emissions, mitigation measures, and background information.

Other Implementing Laws and Regulations

There are a number laws that have been adopted as a part of the State of California's efforts to reduce GHG emissions and their contribution to climate change. State laws and regulations related to growth, development, planning and municipal operations in Santa Clara include, but are not limited to:

- California Mandatory Commercial Recycling Law (AB 341)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Various Diesel-Fuel Vehicle Idling regulations in Chapter 13 of the California Code of Regulations
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Implementation of the policies in the City's General Plan as a part of the City's development permitting and other programs provides for meeting building standards for energy efficiency, recycling, and water conservation, consistent with the laws and regulations designed to reduce greenhouse gas emissions.

Local

<u>City of Santa Clara General Plan</u>

The Santa Clara 2010-2035 General Plan includes policies that address the reduction of greenhouse gas emissions during the planning horizon of the General Plan. Goals and policies that address sustainability (see Appendix 8.13: Sustainability Goals and Policies Matrix in the General Plan) are aimed at reducing the City's contribution to GHG emissions. As described below, the development of a comprehensive GHG emissions reduction strategy for the City is also included in the General Plan.

Climate Action Plan

The City of Santa Clara has a comprehensive GHG emissions reduction strategy (Climate Action Plan) to achieve its fair share of statewide emissions reductions for the 2020 timeframe consistent with AB 32, the Global Warming Solutions Act. The Climate Action Plan was adopted on December 3, 2013. The City of Santa Clara Climate Action Plan specifies the strategies and measures to be taken for a number of focus areas (coal-free and large renewables, energy efficiency, water conservation, transportation and land use, waste reduction, etc.) citywide to achieve the overall emission reduction target, and includes an adaptive management process that can incorporate new technology and respond when goals are not being met.

A key reduction measure that is being undertaken by the City of Santa Clara under the Climate Action Plan is in the *Coal-Free and Large Renewables* focus area. The City of Santa Clara operates Silicon Valley Power (SVP), a publicly owned utility that provides electricity for the community of Santa Clara, including the project site. Data centers constitute a large portion of the electricity used in the City of Santa Clara; about 28 percent on average. Since nearly half (48 percent) of Santa Clara's GHG emissions result from electricity use, removing GHG-intensive sources of electricity generation (such as coal) is a major focus area in the Climate Action Plan for achieving the City's GHG reduction goals. This measure is being undertaken by Silicon Valley Power.

CEQA clearance for all discretionary development proposals are required to address the consistency of individual projects with reduction measures in the Climate Action Plan and goals and policies in the General Plan designed to reduce GHG emissions. Compliance with appropriate measures in the Climate Action Plan would ensure an individual project's consistency with an adopted GHG reduction plan. Projects that are consistent with the Climate Action Plan would have a less than significant impact related to GHG emissions.

4.7.1.2 *Existing Conditions*

The project site is currently developed with an approximately 300,000 sf industrial building, occupied by General Dynamics. The main source of GHG emissions associated with the existing uses on-site is the electricity consumed during building operations. Additional emissions also result from vehicle trips associated with the building's daily operations.

4.7.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	1,2
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	1,2

Greenhouse gas emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient greenhouse gas emissions on its own to noticeably change the global average temperature. The combination of greenhouse gas emissions from past, present, and future projects in Santa Clara, the entire state of California, and across the nation and around the world, contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

Per the CEQA Guidelines, a lead agency may analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions that has been adopted in a public process following environmental review. The City of Santa Clara adopted its CAP (a greenhouse gas reduction strategy) in 2013 in conformance with its most recent General Plan Update. The City's projected emissions and the CAP are consistent with measures necessary to meet statewide 2020 goals established by AB 32 and addressed in the Climate Change Scoping Plan. The threshold of significance for whether a development project in the City of Santa Clara would generate greenhouse gas emissions that would have a significant impact on the environment therefore would be whether or not the project conforms to the applicable reduction measures in the City's CAP.

The discussion that follows the description of project emissions (*Section 4.7.2.4 Consistency with Plans and Programs)* focuses on whether project emissions represent a cumulatively considerable contribution to climate change as determined by consistency with the City of Santa Clara General Plan and CAP, as well as statewide efforts to curb GHG emissions.

4.7.2.1 *Overview of GHG Emissions*

GHG emissions from the proposed project would consist of emissions from vehicle trips to and from the building and emissions related to the generation of electricity used in the data center building. Data centers are an energy-intensive land use, requiring more electricity than other types of development. The primary function of the data center is to house computer servers, which require electricity and cooling 24 hours a day to operate. The project is proposed to be implemented prior to 2020.

Silicon Valley Power Electricity Generation

Electricity for the data center facility is provided by Silicon Valley Power (SVP), which is the public electric utility of the City of Santa Clara. Santa Clara currently has ownership interest, or has purchase agreements for 1,079.15 MW of electricity.[10] In 2015, approximately 36.3 percent of that generation is eligible as renewable (as defined by the California Energy Commission) and an additional 15.1 percent is otherwise a non-GHG emitting resource (i.e. large-hydroelectric).[11] This capacity far exceeds City of Santa Clara's current peak electricity demand of approximately 522 MW. No new generation peak capacity is necessary to meet the capacity requirements of new construction, or redeveloped facilities within the City to meet the near or projected future demand.

The City of Santa Clara follows the State's preferred loading order in procuring new energy resources. First, the current load (customer) is encouraged to participate in energy efficiency

[10] Silicon Valley Power, City of Santa Clara. The Silicon Valley Power Resources Map. Accessed: May 18, 2017. Available at: http://www.siliconvalleypower.com/home/showdocument?id=5763.
[11] Silicon Valley Power. "Power Content Label". Accessed: January 24, 2017. Available at: http://siliconvalleypower.com/svp-and-community/about-svp/power-content-label

programs to reduce their usage, thus freeing up existing resources (and any related emissions) for new load (Electricity demand). In addition, the City of Santa Clara encourages the use of renewable resources and clean distributed generation, and has seen a significant increase in its applications for large and small rooftop photovoltaics (PV). Demand displaced by customer-based renewable projects is also available to meet new load requests.

The City of Santa Clara seeks to meet its Renewable Portfolio Standard (RPS) through the addition of new renewable resources. In order to meet anticipated increases in energy needs (as separate from peak generation capacity requirements) the City of Santa Clara has contracted for additional wind energy including the Big Horn II Wind Project that will provide the City of Santa Clara up to an additional 17.5 MW of GHG-emission-free electricity.

SVP has a lower emission rate than the statewide California power mix because it utilizes a much higher portion of renewable sources. A comparison of SVP's and the statewide power mix is shown in Table 4.7-1.

Table 4.7-1
Comparison of SVP and Statewide Power Mix

Energy Resources	2015 SVP Power Mix	2014 CA Power Mix (For Comparison)
Eligible Renewables (Biomass & Waste, Geothermal, Eligible Hydro, Solar, Wind)	28.6%	20.1%
Coal	8.8%	6.4%
Large Hydro	13.2%	5.5%
Natural Gas	46.2%	44.5%
Nuclear	0%	8.5%
Other	0%	0%
Unspecified Source Of Power (Not Traceable To Specific Sources)	3.2%	15%
Total	100.0%	100.0%

It is important to note that SVP's carbon intensity factor for electricity generation will continue to change as SVP's power mix continues to reduce the percentage of electricity produced by coal-fired power plants and increase the use of renewable resources. As noted above, the City of Santa Clara and Silicon Valley Power have committed to coal-free and increase large renewables power generation as a part of the City's Climate Action Plan.

Proposed Efficiency Measures

Overview: Power Usage Effectiveness During Operation

Power Usage Effectiveness, or PUE, is a metric used to compare the efficiency of facilities that house computer servers. PUE is defined as the ratio of total facility energy use to Information Technology (IT) (i.e., server) power draw (e.g., PUE = Total Facility Source Energy/ IT Source Energy). For example a PUE of two (2), means that the data center or laboratory must draw two (2) watts of electricity for every one (1) watt of power consumed by the IT/server equipment. It is equal to the total energy consumption of a data center (for all fuels) divided by the energy consumption

used for the IT equipment. The ideal PUE is one (1) where all power drawn by the facility goes to the IT infrastructure.

With implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the PUE of the data center would be 1.09.

Energy and Water Use Efficiency Measures in Building Design

Due to the heat generated by the data center equipment, air cooling is one of the main uses of electricity in data center operations. In order to reduce greenhouse gas emissions and reduce the use of energy related to building operations, the project proposes to implement of the following efficiency measures:

- Dedicated roof space for future solar.
- Low-e Insulated glass.
- Daylight penetration to offices.
- Reflective roof surface.
- Meet or exceed Title 24 requirements.
- Bike lockers.
- Employee showers.
- Electric vehicle (EV) parking.
- Low flow plumbing fixtures.
- Landscaping would meet City of Santa Clara requirements for low water use.
- Landscaping would be irrigated with recycled water.

4.7.2.2 *Stationary Equipment Emissions from Routine Testing*

The consumption of diesel fuel to test generators will result in direct CO_2 emissions. On an annual basis, the project's total operational emissions related to emergency backup generator use would be approximately 2,498 metric tons of CO_2 per year.[12] This is well below the BAAQMD threshold for stationary sources of 10,000 metric tons per year of CO_2e for stationary sources. **(Less Than Significant Impact)**

4.7.2.3 *Construction-Related Emissions*

Neither the City of Santa Clara nor BAAQMD have a threshold for construction emissions. Construction of the proposed project would result in GHG emissions related to vehicle trips and operation of construction equipment. These emissions would be temporary in nature and would be less than the indirect emissions associated with operation of the proposed uses. Construction emissions would be minor, since construction of the project only requires placement of new equipment, trenching and minor paving and landscape installation.

As a Best Management Practice (BMP), the project will participate in the City's Construction and Demolition Debris Recycling Program by recycling or diverting at least 50 percent of materials

[12] James Reyff. Illingworth & Rodkin, Inc.

generated for discards by the project in order to reduce the amount of demolition and construction waste going to the landfill.

4.7.2.4 *Consistency with Plans and Programs*

Climate Action Plan

As described previously, the *City of Santa Clara Climate Action Plan* was adopted in December 2013. The CAP, which is part of the City's General Plan, identifies a series of GHG emissions reduction measures to be implemented by development projects that would allow the City to achieve its GHG reduction goals. The measures center around seven focus areas: coal-free and large renewables, energy efficiency, water conservation, waste reduction, off-road equipment, transportation and land use, and urban heat island effect.

The CAP includes measures applicable to City government, existing development and new development projects in Santa Clara. The project's conformance with applicable reduction measures for new development in the CAP are discussed below.

Energy Efficiency Measures

Measure 2.3 Data Centers calls for completion of a feasibility study of energy efficient practices for new data center projects with an average rack power rating[13] of 15 kilowatts or more to achieve a power usage effectiveness (PUE) of 1.2 or lower.

The average rack power rating for the data center project is estimated at 8.1 kW, which is below the criteria in Measure 2.3. Therefore, a formal feasibility study of energy efficient practices and achievement of a PUE of 1.2 or lower is not required. As described previously, the PUE of the proposed data center would be 1.09.

Water Conservation Measures

Measure 3.1 Water Conservation calls for a reduction in per capita water use to meet Urban Water Management targets by 2020. Development standards for water conservation will be applied to increase efficiency in indoor and outdoor water use areas. Water conservation measures include the use of:

- recycled or non-potable graywater for landscape irrigation;
- water efficient landscaping with low water usage plant material to minimize irrigation requirements; and
- ultra-low flow toilets and plumbing fixtures in the building.

[13] Average rack power rating is a measure of the power available for use on a rack used to store computer servers. The higher the value of kilowatts, the greater power density per rack and generally more energy use per square foot of building area in a data center.

Waste Reduction Measures

Measure 4.2 Increased Waste Diversion calls for an increase in solid waste diversion rate through recycling efforts, curbside food waste pickup, and construction and demolition waste programs. The project would divert construction and demolition waste during project construction to help the City reach its 80 percent waste diversion rate.

Off-Road Equipment

Measure 5.2 Alternative Construction Fuels requires construction projects to comply with BAAQMD best management practices, including alternative-fueled vehicles and equipment. The project would adopt BAAQMD best management practices, as described in *Section 4.2.3*.

Transportation and Land Use

Measure 6.1 Transportation Demand Management Program requires new development located in the City's transportation districts to implement a transportation demand program (TDM) to reduce drive-alone trips. The project site is located within Transportation District 1 – North of Caltrain. Based on Table 9: Minimum Vehicle Miles Traveled Reduction Requirements by Transportation District and Land Use Designation of the Climate Action Plan, the project would be required to have a 25 percent vehicle miles traveled (VMT) reduction, with 10 percent coming from TDM measures.

The following are examples of measures that could be included as part of the TDM Plan to reduce vehicle trips by 10 percent consistent with the City's CAP:

- Electric car charging stations,
- Secure bicycle parking facilities,
- Preferred carpool and vanpool parking, and
- Facilitation of ride sharing services.

Applicable General Plan Policies

In addition to the reduction measures in the Climate Action Plan, the City of Santa Clara General Plan has goals and policies to address sustainability (see Appendix 8.13: Sustainability Goals and Policies Matrix in the General Plan) aimed at reducing the City's contribution to GHG emissions. For the proposed project, implementation of policies that increase energy efficiency or reduce energy use would effectively reduce indirect GHG emissions associated with energy generation. The consistency of the proposed project with the Land Use, Air Quality, Energy, and Water Policies of the General Plan is described in Table 4.7-3.

Table 4.7-3: General Plan Sustainability Policies	
Emission Reduction Policies	**Project Consistency**
Air Quality Policies	
5.10.2-P3 Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.	The project proposes to use emergency generators with advanced air pollution controls. The generator testing schedule includes measures to reduce local air quality impacts.
5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.	Water conservation and energy efficiency measures included in the project will reduce GHG emissions associated with the generation of electricity
Energy Policies	
5.10.3-P1 Promote the use of renewable energy resources, conservation and recycling programs.	The project will divert at least 50 percent of construction waste. The project will utilize lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. Water efficient landscaping and ultra-low flow plumbing fixtures in the building will be employed to limit water consumption.
5.10.3-P4 Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.	
5.10.3-P5 Reduce energy consumption through sustainable construction practices, materials and recycling.	
5.10.3-P6 Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.	
5.10.3-P8 Provide incentives for LEED certified, or equivalent development.	

Table 4.7-3: General Plan Sustainability Policies	
Emission Reduction Policies	**Project Consistency**
Water Policies	
5.10.4-P7 Require installation of native and low-water consumption plant species with landscaping new development and public spaces to reduce water usage.	The project will use water efficient landscaping with low water usage plant material to minimize irrigation requirements. Recycled water will be utilized for landscape irrigation.

Bay Area 2017 Clean Air Plan

The Bay Area 2017 Clean Air Plan includes performance objectives, consistent with the State's climate protection goals under AB 32, SB 375, and SB 32, designed to reduce emissions of GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030. The 2017 Clean Air Plan identifies a range of control measures that make up the Clean Air Plan's control strategy for emissions, including GHGs.

Due to the relatively high electrical demand of the data center uses on the site, energy efficiency measures have been included in the design and operation of the electrical and mechanical systems on the site. This is in keeping with the general purpose of Energy Sector Control Measures in the Clean Air Plan.

Plan One Bay Area/ California Senate Bill 375 – Redesigning Communities to Reduce Greenhouse Gases

Under the requirements of SB 375, the Metropolitan Planning Organizations (MPO) in partnership with Association of Bay Area Governments (ABAG) have developed a Sustainable Community Strategy with the adopted *Plan One Bay Area* to achieve the Bay Area's regional GHG reduction target. Targets for the MTC in the San Francisco Bay Area, originally adopted in September 2010 by CARB, include a seven (7) percent reduction in GHG per capita from passenger vehicles by 2020 compared to emissions in 2005. The adopted target for 2035 is a 15 percent reduction per capita from passenger vehicles when compared to emissions in 2005. The emission reduction targets are for those associated with land use and transportation strategies only.

The project has a low concentration of employment and would not contribute to a substantial increase in passenger vehicle travel within the region.

Applicable State Climate Change Strategies and Policies

In 2008, the Governor of California issued Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how State agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. The 2009 *California Climate Adaptation Strategy* was developed in response to the executive order. Adaptation to projected sea level rise is addressed in *Section 4.9 Hydrology and Water Quality.*

The CARB-approved *Climate Change Scoping Plan* outlines a comprehensive set of actions intended to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. Actions associated with energy efficiency standards and renewables portfolio standards are measures that will most greatly influence GHG emissions of the project over time.

The project would be generally consistent with the Climate Change Scoping Plan, as updated, and appropriate GHG Control Measures in the Bay Area 2017 Clean Air Plan (as discussed above). As discussed above, the project would not conflict with plans, policies or regulations adopted for the purpose of reducing the emissions of GHG. Therefore, the project would not conflict with any currently adopted local plans, policies, or regulations pertaining to GHG emissions and would not generate greenhouse gas emissions that would have a significant impact on the environment. **(Less Than Significant Impact)**

4.7.3 Conclusion

With implementation of the efficiency measures and BMPs included in the project and in combination with the green power mix utilized by SVP, GHG emissions related to the proposed project would not conflict with the Santa Clara Climate Action Plan or other plans, policies or regulations adopted for the purpose of reducing the emissions of GHG. **(Less Than Significant Impact)**

4.8 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based, in part, on a Phase I Environmental Site Assessment (ESA) prepared by *WSP Group*, in October 2014. A copy of this report is attached as Appendix E of this Initial Study.

4.8.1 Environmental Setting

4.8.1.1 *Regulatory Setting*

Federal, State, and Local

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. Key federal regulations and policies related to development include the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, and the Resource Conservation and Recovery Act (RCRA). In California, the US EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies including the Santa Clara County Department of Environmental Health (SCCDEH) have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Other regional agencies are responsible for programs regulating emissions to the air, surface water, and groundwater include the Bay Area Air Quality Management District (BAAQMD), which has oversight over air emissions, and the Regional Water Quality Control Board (RWQCB) which regulates discharges and releases to surface waters and groundwater.

Oversight over investigation and remediation of sites impacted by hazardous materials releases can be completed by state agencies, such as the Department of Toxic Substances Control [(DTSC) a division of CalEPA)], regional agencies, such as the RWQCB, or local agencies, such as SCCDEH. The SCCDEH oversees investigation and remediation Leaking Underground Storage Tank (LUST) sites in Santa Clara. Other agencies that regulate hazardous materials include the California Department of Transportation and California Highway Patrol (transportation safety), and California Occupational Safety and Health Administration (Cal/OSHA).

Cortese List (Government Code Section 65962.5)

Section 65962.5 of the Government Code requires CalEPA) to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by the State, local agencies, and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by DTSC, State Water Resources Control Board (SWRCB), and the Department of Resources Recycling and Recovery (CalRecycle).

California Accidental Release Prevention Program (CalARP)

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of property. Facilities that are required to participate in the CalARP program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if

accidentally released. The County of Santa Clara Fire Department reviews CalARP risk management plans as the Certified Unified Program Agency (CUPA).

4.8.1.2 *Existing Conditions*

Historical Uses

The project site was originally agricultural land until the construction of a portion of the existing building on-site in 1979. The remaining portions of the building were constructed in 1980-81, 1983-34, and 1985. Nortel Networks, a telecommunications and data networking equipment manufacturer occupied the buildings until 2002. Nortel Networks conducted manufacturing, assembly, and distribution of circuit boards; assembly and distribution of telephone switching equipment; and research and development. The company previously used and stored acetone, isopropyl alcohol, lead solder and liquid nitrogen on the property.[14]

Adjacent properties were agricultural fields from at least 1956. Commercial properties were first constructed east of the site in 1968.

Historically Recognized Environmental Conditions

General Dynamics, the current occupant of the existing buildings, moved to the site in 2005 after Nortel Networks vacated the buildings. Prior to General Dynamics' occupancy, two releases occurred on the property including historical releases from manufacturing chemical storage areas maintained by Nortel Networks. One of the releases contaminated groundwater onsite, resulting in monitoring by the SFRWQCB. In 2005, the SFRWQCB granted the site a "No Further Action" status, and the release has since been considered a closed case.

In January 2005, an accidental release of approximately 200 gallons of diesel on a paved area occurred on-site. The diesel spill then flowed into the on-site storm water drainage system. A subsequent groundwater and soil investigation determined that no further action was necessary, as the releases minimally affected soils on-site and did not contaminate groundwater.

Current Uses

As described previously, the project site is developed with an office/R&D building occupied by General Dynamics, a telecommunications and networking data manufacturer. The project site is identified on the Resource Conservation and Recovery Act – Small Quantity Generators (RCRA-SQG), Facility Index System (FINDS), California Spills, Leaks Investigation and Cleanup (CA SLIC), California Enforcement Action (CA ENF), California Air Emissions Database (CA EMI), California Hazardous Waste Information System (CA Haznet) and FINDS databases.

The General Dynamics facility was used for research and development of high security aerospace and defense products and services. Operations conducted at the subject property include research and development laboratories, product and equipment storage, and administrative offices.

[14] WASP Group. Phase I Environmental Site Assessment – Final. 2305 Mission College Boulevard – Santa Clara, California. October 13, 2014.

Based on a review of historical records, no underground storage tanks (USTs) have been present on-site. The site has aboveground storage tanks, including a 120,000 gallon fire water tank on the north side of the property, a 60-gallon diesel fuel tank within the fire pump house on the north side of the site, a 300-gallon diesel belly tank associated with the standby generator, and a 175-gallon diesel belly tank associated with the second emergency generator. All of the diesel aboveground storage tanks are situated within secondary containment.

4.8.1.3 *Off-Site Sources of Contamination*

Based on the California SWRCB's Geotracker database, there are no listed properties within 1,000 feet of the project site that have had or have reports of on-site contamination.

An EDR search performed in the 2014 Phase I Environmental Site Assessment identified neighboring properties with the potential to affect the project site from previous environmental contamination or hazardous material storage. Of the 60 sites identified, only 17 are located upgradient of the subject property. 12 of the 17 upgradient sites are located between 0.5 and one mile away from the project site and therefore, do not likely pose an environmental concern to the project site. The five remaining sites that have the potential to affect the project site include:

- Mission Investors, LLC (2350 Mission College Blvd.) – listed as having one aboveground storage tank and one UST on-site. There have been no identified spills, releases, or air emissions permit violations associated with the property. The property does not pose an environmental concern to the project site.

- Fire Department #8 (2400 Agnew Road) – listed on the California LUST, Historical LUST sites as having a release of diesel in 1996 and has since granted case closure in 2000. The site also has four active USTs with no associated spills or releases. The property does not pose an environmental concern to the project site.

- Intel Corp. headquarters (2200 Mission College Blvd., 3601 Juliette Lane) – listed as having a historical release onsite due to electronics manufacturing. The listed LUST and SLIC cases for these sites have been granted case closure status. Soil and groundwater beneath the property is contaminated with VOCs and land use is restricted. The facility has entered into a Voluntary Cleanup Program. A Covenant of Environmental Restrictions for the property concluded that the contamination risk to public exposure has been lessened due to remediation activities. Based on information provided in the EDR report and Covenant, the property is unlikely to pose an environmental risk to the project site.

- Siliconix Inc., and AT&T Mobility (2201 Laurelwood Road) – listed as having a release and subsequent enforcement action for VOC contaminated groundwater due to historical manufacturing operations. A groundwater remediation program is ongoing at the site. The highest concentrations on VOC are on the south side of the property. The closest monitoring well to the project site indicated low levels of VOCs. The property does not pose an environmental concern to the project site.

- Exxon #7 (2181 Laurelwood Road) – listed as having a historical release to groundwater. The site was granted case closure status in 2004. The property does not pose an environmental concern to the project site.

4.8.1.4 *Other Hazards*

Airports

The San José Norman Y. Mineta International Airport is located approximately 1.7 miles south of the project site. The project site is within the Airport Influence Area, but not within an Airport Safety zone, as defined by the CLUP. The Airport Influence Area is defined as a feature-based boundary around the Airport within which all actions, regulations, and permits must be evaluated by local agencies, such as the City of Santa Clara, to determine how the CLUP policies related to noise, height, safety, and land use may impact the proposed development. Of particular interest to the ALUC are areas "not already devoted to incompatible uses" and, more specifically, undeveloped lands within the Airport Influence Area. The planning effort is focused on identifying these lands because of the policies and standards of the plan are intended to address the compatibility of future development in these areas. Although the City must consider the CLUP's policies, the project does not need to be referred to the ALUC for a compatibility determination, because the project approvals do not involve the amendment of a General Plan or Specific Plan or adoption of a zoning ordinance.

Federal Aviation Regulations, Part 77, "Objects Affecting Navigable Airspace" (referred to as FAR Part 77), requires that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above ground. The San José Airport released a contour map which includes height restrictions for new developments that could be a hazard to aircraft safety and would require FAA notification under FAR Part 77. The project site is not located within a designated airport safety zone.[15] The project site is, however, within the Mid Traffic Pattern Zone and is restricted to a maximum structure height of 212 feet above mean sea level.[16]

The project site is not located in the vicinity of a private airstrip.

Wildland Fire Hazards

The project site is located in an urban area and is not within a Very-High Fire Hazard Severity Zone for wildland fires.

[15] Santa Clara County. *Comprehensive Land Use Plan – Santa Clara County. Norman Y. Mineta San José International Airport.* May 25, 2011.
[16] Ibid.

4.8.2 Checklist and Discussion of Impacts

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:						
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	1,2
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	1,2
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	1,2
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	☐	☐	☒	☐	1,2,12
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐	1,2
f)	For a project within the vicinity of a private airstrip, will the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	1,2
g)	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	1,2
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒	1,2

As previously discussed in *Section 4.0*, on December 17, 2015, the California Supreme Court issued an opinion in "CBIA vs. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents, with certain important exceptions. One

of those exceptions is that environmental documents must consider potential noise and safety impacts on projects due to proximity to an airport, pursuant to Public Resources Code 21096.

4.8.2.1 *On-Site Hazardous Materials impacts*

Soil and Groundwater Contamination Impacts During Construction

As stated above, the project site may contain contaminated soil and groundwater from previous on- and off-site uses and spills. Additionally, relocation of the sanitary sewer lines may cause leaking into the soil and groundwater on-site, and/or may expose areas of previously unknown contamination. The Phase I ESA completed by *WSP* in October 2014, found that potentially contaminated soil and groundwater would be unlikely to significantly impact the proposed data center; however, while excavation is anticipated to be limited in depth, construction workers could be exposed to contaminated soil and or groundwater during excavation, grading, and construction activities including relocation or sanitary sewer lines.

Impact HAZ-1: Construction of the proposed project could result in construction worker exposure to contaminated soil and or groundwater. **(Significant Impact)**

Mitigation Measures: Implementation of the following mitigation measures would reduce potentially significant soil and or groundwater impacts to construction workers to a less than significant level.

MM HAZ – 1.1: Prior to the issuance of grading permits, shallow soil samples shall be taken in areas where soil disturbance is anticipated to determine if contaminated soils with concentrations above established construction/trench worker thresholds may be present due to historical agricultural use and from historical leaks and spills. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division prior to initiation of work. Once the soil sampling analysis is complete, a report of the findings will be provided to the Director of Community Development and other applicable City staff for review.

MM HAZ – 1.2: Documentation of the results of the soil sampling shall be submitted to and reviewed by the City of Santa Clara prior to the issuance of a grading permit. Any soil with concentrations above applicable ESLs or hazardous waste limits would be characterized, removed, and disposed of off-site at an appropriate landfill according to all state and federal requirements.

MM HAZ – 1.3: A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include: a detailed discussion of the site background; a summary of the analytical results from MM HAZ-1.1; preparation of a Health and Safety Plan by an industrial hygienist; protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected; worker training requirements, health and safety measures and soil handing procedures shall be described; protocols

shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be implemented; notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction; notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction; on-site soil reuse guidelines; sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; soil stockpiling protocols; and protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, the City's Director of Community Development, and/or the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division.

MM HAZ – 1.4: If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures will be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either (1) managed or treated in place, if deemed appropriate by the oversight agency or (2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations and applicable local, state, and federal laws.

MM HAZ – 1.5: Sanitary Sewer Sampling and Analysis Plan: Prior to removing or decommissioning the sanitary sewer line on-site, a Sampling and Analysis Plan shall be prepared presenting the protocols for line removal and confirmation sampling. These plans shall be submitted to the Community Development Director for review and approval prior to construction.

With implementation of the mitigation measures identified above, the proposed project would result in a less than significant soil and groundwater contamination impact. **(Less than Significant Impact with Mitigation Incorporated)**

4.8.2.2 *Hazardous Materials Impacts from the Project*

Project Operation Impacts

Operation of the proposed project would include the use and storage of diesel fuel in 10,000-gallon aboveground tanks beneath each block of five generators. The tanks would be double-walled and have leak detection systems. Some oils and lubricants could be stored on-site for maintenance of mechanical equipment in the equipment yards.

Hazardous materials storage at the proposed data center would be regulated under local, state and federal regulations. A Hazardous Materials Business Plan would be completed for the safe storage and use of chemicals.

Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the proposed fuel storage tanks and the use or storage of diesel fuel, oils and lubricants by the project would not create a significant impact on the environment. **(Less Than Significant Impact)**

Project Construction Impacts

Asbestos and Lead Based Paint

Due to the age of the existing building on site, (pre-1980 construction), asbestos-containing materials (ACMs) and lead-based paint may be present.

Demolition of the existing building on the project site could expose construction workers or residents in the vicinity of the project site to harmful levels of ACMs or lead. The project is required to conform to the following regulatory programs and to implement the following measures to reduce impacts to the presence of ACMs and/or lead-based paint:

- In conformance with State and local laws, a visual inspection/pre-demolition survey, and possible sampling, shall be conducted prior to the demolition of on-site buildings to determine the presence of asbestos-containing materials and/or lead-based paint.
- Prior to demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations (CCR) 1523.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed.
- All potentially friable ACMs shall be removed in accordance with NESGAP guidelines prior to any building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos.
- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.

Conformance with aforementioned regulatory requirements will result in a less than significant impact from ACMs and lead.

4.8.2.3 *Existing Hazardous Materials Conditions Affecting the Project*

Impacts from Historic Site Operations

As described previously, the site is identified on the Spills, Leaks, Investigation Cleanup database as having historical release of solvents to groundwater and release of total petroleum hydrocarbons. As of 2005, the property was given a "No Further Action Status" by the San Francisco Regional Water Quality Control Board. Regardless, as stated previously, the project site may contain contaminated soil and groundwater from previous on-site uses and spills. Implementation of mitigations measures HAZ MM-1.1 – HAZ MM-1.5 would ensure that the project would not be affected by any hazardous materials from historic uses on the site.

Impacts of Off-Site Facilities on the Project

Nearby sites identified on the California Geotracker database, as described in *Section 4.8.1.2* above, have all received a "Case Closure" status or are identified as not posing an environmental concern to the project site. Regardless, as stated previously, the project site may contain contaminated soil and groundwater from previous off-site uses and spills. Implementation of mitigations measures HAZ MM-1.1 – HAZ MM-1.5 would ensure that the project would not be affected by any hazardous materials from off-site facilities

4.8.2.4 *Airport Hazards*

The proposed project site is approximately 1.7 miles north of the San José Norman Y. Mineta International Airport. As a nonresidential land use, the proposed data center would be compatible with the land use policies of the CLUP. Aircraft noise levels at the project site are discussed in *Section 4.12, Noise and Vibration* of this Initial Study. As described previously, the project site is not located within a designated Airport Safety Zone, however, it is located within the Airport Influence Area and is subject to a maximum structure height of 212 feet above mean sea level (amsl). The maximum height of the proposed structure would be approximately 70 feet above ground level, or roughly 100 feet amsl, which is below the maximum building height allowed under FAR Part 77 for the project site (212 feet msl). The proposed project, therefore, would be compatible with applicable CLUP policies and the Airport Influence Area for building height. **(Less Than Significant Impact)**

4.8.2.5 *Other Hazards*

The nearest school to the project site is Montague Elementary School (750 Laurie Avenue), approximately 1.6 miles to the east. The project would not routinely generate hazardous air emissions nor would it handle acutely hazardous materials or hazardous waste and therefore, would not impact schools within the project area. **(Less Than Significant Impact)**

4.8.3 Conclusion

Project implementation would result in a less than significant impact to hazards and hazardous materials. **(Less Than Significant Impact)**

4.9 HYDROLOGY AND WATER QUALITY

The following discussion is based in part on a 500-year and 1000-year Floodplain Analysis prepared for the project by *Schaaf & Wheeler* in September 2016. A copy of the summary is attached as Appendix F of this Initial Study.

4.9.1 Environmental Setting

4.9.1.1 *Regulatory Framework*

Water Quality

The Federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality. Regulations set forth by the U.S. Environmental Protection Agency (EPA) and the State Water Resources Control Board have been developed to fulfill the requirements of this legislation. EPA's regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by water quality control boards, which for the Santa Clara area is the San Francisco Bay RWQCB.

Municipal Regional Stormwater Permit

The San Francisco Regional Water Quality Control Board has issued a Municipal Regional Stormwater NPDES Permit (Permit Number CAS612008) (MRP). The regional permit applies to 77 Bay Area municipalities, including the City of Santa Clara. Under provisions of the NPDES Municipal Permit, redevelopment projects that disturb more than 10,000 sf are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. Amendments to the MRP require all of the post-construction runoff to be treated by using Low Impact Development (LID) treatment controls, such as biotreatment facilities. The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) assists co-permittees, such as the City of Santa Clara, implement the provisions of the Municipal NPDES permit.

In addition to water quality controls, the MRP requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from the permit requirements if they do not meet the size threshold, drain into tidally influenced areas or directly into the Bay, drain into hardened channels, or are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious (per the city of Santa Clara Hydromodification Management Applicability Map). The project is a redevelopment project located in a subwatershed or catchment area that is greater than or equal to 65 percent impervious.[17] Therefore, the project site is not subject to the hydromodification management requirements of the Municipal NPDES permit.

[17] Santa Clara Valley Urban Runoff Pollution Prevention Program. *HMP Applicability Map City of Santa Clara.* November 2010. Accessed: May 2, 2017. Available at: http://www.scvurppp-w2k.com/HMP_app_maps/Santa_Clara_HMP_Map.pdf

Impaired Surface Water Bodies

Under Section 303(d) of the 1972 Clean Water Act, states are required to identify impaired surface water bodies and develop total maximum daily loads (TMDLs) for contaminants of concern.[18] The TMDL is the quantity of pollutant that can be safely assimilated by a water body without violating water quality standards. Listing of a water body as impaired does not necessarily suggest that the water body cannot support the beneficial uses; rather, the intent is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for future water quality degradation. The Guadalupe River is listed as an impaired waterbody in the U.S. EPA's Section 303(d) Listed Waters for California. The source of impairment is attributed to urban runoff/storm sewers, mine tailings, and illegal dumping. The contaminants listed include diazinon, mercury and trash.[19]

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) in order to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRM) that identify Special Flood Hazard Areas (SFHA). An SFHA is an area that will be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood. The SFHA is the area where the NFIP floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Chapter 15.45 of the Santa Clara City Code has adopted flood damage prevention measures as a part of the City's Prevention of Flood Damage regulations.

4.9.1.2 *Existing Conditions*

Flooding

According to the FEMA flood map encompassing the project site, the site is located within flood Zone X and Zone AH.[20] Zone X are areas between the limits of the base flood level (or 100-year) and the 0.2-percent annual-chance (or 500-year) flood. Zone AH is defined as areas with a one-percent annual chance of shallow flooding, with average flood depths of 1 to 3 feet (usually areas of ponding). The existing elevation is approximately 27 feet above mean sea level (msl).

The floodplain at the project site was remapped by Schaaf & Wheeler for the Santa Clara Valley Water District in 2014. This updated mapping represents the best available floodplain information for the site. The updated map shows that the project site is not subject to a 100-year flood.[21,22]

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[18] California State Water Resources Control Board. Total Maximum Daily Load Program. Accessed: August 31, 2016. Available at: http://www.swrcb.ca.gov/water_issues/programs/tmdl/303d_lists2006_approved.shtml.

[19] U.S. EPA. *California 303(d) Listed Waters for Reporting Year 2010.* December 2010. Accessed: January 25, 2017. Available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml

[20] Schaaf & Wheeler. *San Tomas Aquino 500-year and 1000-year Floodplain Analysis.* September 30, 2016.

[21] Ibid.

[22] Caitlin Gilmore, Schaaf & Wheeler.

Inundation Hazards

In the ocean, seismically-induced waves are caused by displacement of the sea floor by a submarine earthquake and are called tsunamis. Seiches are waves produced in a confined body of water such as a lake or reservoir by earthquake ground shaking or landsliding. Sieches are possible at reservoir, lake or pond sites. The project area is not subject to inundation from a seiche, tsunami, or mudflow.[23]

Storm Drainage

The City of Santa Clara owns and maintains the municipal storm drainage system in the project vicinity. Stormwater on site currently drains in pipes towards the storm drainage system in Agnew Road. Stormwater from the site is conveyed to a 24-inch storm drain pipe in Agnew Road. The runoff eventually empties into San Tomas Aquino Creek and flows into the San Francisco Bay.

Groundwater

Depth to groundwater beneath the project site is typically encountered at 8 to eleven feet below ground surface (bgs), and flows in a north direction.[24]

4.9.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	1,2
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells will drop to a level which will not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	1,2
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which will result in substantial erosion or siltation on-or off-site?	☐	☐	☒	☐	1,2

[23] Association of Bay Area Governments. *San Francisco Bay Area Hazards*. August 25, 2015.
[24] Cornerstone Earth Group. *Geotechnical Investigation. 2305 Mission College Boulevard Data Center.* January 18, 2016.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on-or off-site?	☐	☐	☒	☐	1,2
e) Create or contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	1,2
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐	1,2
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒	1,2,13
h) Place within a 100-year flood hazard area structures which will impede or redirect flood flows?	☐	☐	☐	☒	1,2,13
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒	1,2,13
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	1,2

4.9.2.1 *Flooding*

As described previously, although the project site is located within FEMA Flood Zone X and Flood Zone AH, updated mapping completed for the SCVWD shows that the site is not subject to a 100-year flood. Implementation of the proposed project would, therefore, not place housing in a 100-year flood zone, expose people or structures to any significant flood risk, or impede or redirect flood flows. **(Less Than Significant Impact)**

Dam Inundation Hazards

The site is located within a dam failure inundation hazard area of Anderson Dam.[25] In the 1980s, the State Office of Emergency Services required that dam inundation maps be prepared for all dams in the state. The purpose of the maps is to provide information to local emergency service agencies that allows them to plan for a response in the event of a dam failure. Flood waters associated with a

[25] Santa Clara Valley Water District. *Anderson Dam EAP 2009 Flood Inundation Maps*. 2009. Accessed: June 23, 2016. Available at: http://www.valleywater.org/uploadedFiles/Services/CleanReliableWater/WhereDoesYourWaterComeFrom/Reservoirs/Anderson_Dam/Anderson%20Inundation%20Maps%202009.pdf?n=6912.

catastrophic dam failure at Anderson Dam would result in flooding at the site (as well as large portions of the Santa Clara Valley).

Due to the inspection and monitoring program, the distance from the site, and the nature of the on-site uses, proposed site improvements are not anticipated to result in a new substantial hazard from dam failure. While inundation resulting from dam failure could result in damage to structures, the probability of such a failure is extremely remote. The project, therefore, would not be subject to a significant risk of inundation from dam failure. **(Less Than Significant Impact)**

Flooding Impacts Related to Sea Level Rise

The project site is located inland from the San Francisco Bay at an elevation of approximately 27 feet and is not within an area mapped as vulnerable to sea level rise in the General Plan.[26] **(No Impact)**

4.9.2.2 *Storm Drainage Impacts*

Impervious and Pervious Surfaces

New catch basins and storm drain lines would be installed on the site as part of the project, and would connect to the existing City of Santa Clara storm drain system. Bioretention areas would be installed in on-site landscape areas as part of the project, which would help to detain stormwater runoff and infiltrate water into the soil. Additional C.3/post-construction measures such as directing runoff to vegetated swales and beneficial landscaping (i.e., minimizing irrigation, runoff, pesticides and fertilizers) would be implemented (refer to figure 3.0-3). On-site drainage facilities would be designed to meet City of Santa Clara standards and would drain to the existing storm drain system.

Impervious surfaces on the project site would decrease from 87 percent to 78 percent after the construction of the project, as shown in Table 4.9-1.

Table 4.9-1:
Impervious Area Chart

	Impervious	Pervious (sf)	Total Area (sf)	Percent Impervious
Existing	600,659	86,999	687,658	87
Proposed	537,954	149,704	687,658	78

Because the project would reduce the amount of impervious surfaces on the site, implementation of the project would not increase the discharge to the storm drain system that serves the project site.

4.9.2.2 *Water Quality Impacts*

Construction Impacts

Implementation of the proposed project would disturb approximately 15.7 acres and City of Santa Clara requirements under the City's MRP would apply to the project. Construction activities could generate dust, sediment, litter, oil, and other pollutants that could temporarily contaminate water

[26] City of Santa Clara. Integrated Final Environmental Impact Report. *City of Santa Clara Draft 201-2035 General Plan.* Figure 4.4-2. January 2011.

runoff from the site. The City of Santa Clara has developed Standard Permit Conditions based on the RWQCB BMPs to reduce construction-related water quality impacts.

Standard Permit Conditions

The following Standard Permit Conditions would be included in the project to reduce construction-related water quality impacts:

- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities shall be suspended during periods of high winds.
- All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
- Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
- All trucks hauling soil, sand, and other loose materials shall be required to cover all trucks or maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas, and residential streets adjacent to the construction sites shall be swept daily (with water sweepers).
- Vegetation in disturbed areas shall be replanted as quickly as possible.
- All unpaved entrances to the site shall be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City.

The proposed project would include the above Standard Permit Conditions to avoid or reduce construction-related water quality impacts to less than significant level. **(Less than Significant Impact)**

Post-Construction Water Quality Impacts

The proposed project would contribute the same types of stormwater runoff pollutants as the existing development on-site. Runoff from the parking area on-site is likely to contain grease, oil, and trace amounts of heavy metals into drainage.

The proposed project would replace more than 10,000 sf of impervious surfaces and must conform to the requirements of the Municipal Regional Stormwater NPDES permit. A final Stormwater Control Plan will be required prior to the issuance of the building permit. Plans will be certified by engineers to ensure incorporation of appropriate and effective source control measures to meet Low Impact Development (LID) requirements, to prevent discharge of pollutants, reduce impervious surfaces, retain a percentage of runoff on-site for percolation, and treatment control measures to remove pollutants from runoff entering the stormwater basins and eventually to the Guadalupe River and the San Francisco Bay. Installation and maintenance of the proposed Stormwater Control Plan would result in a less than significant impact on water quality. **(Less than Significant Impact)**

4.9.3 Conclusion

The proposed project would not result in substantial adverse flooding or drainage impacts. **(Less Than Significant Impact)**

With implementation of the standard measures included in the project, potential impacts to water quality would be reduced to a less than significant level. **(Less Than Significant Impact)**

4.10 LAND USE AND PLANNING

4.10.1 Environmental Setting

4.10.1.1 *Regulatory Framework*

City of Santa Clara

General Plan Land Use Designation

The Land Use Diagram of the *2010-2035 General Plan* contains three phases: Phase 1: 2010-2015, Phase II: 2015-2023, and Phase III: 2023-2035. The project site is designated as *Low Intensity Office/R&D* and will retain its designation for Phases I, II and III.

The *Low Intensity Office/R&D* designation is intended for campus-like office development that includes office and R&D, as well as medical facilities and free standing data centers, with manufacturing uses limited to a maximum of 20 percent of the building area. It includes landscaped areas for employee activities and parking that may be surface, structured, or below-grade. Accessory or secondary small scale supporting retail uses that serve local employees and visitors are also permitted. The maximum FAR allowed under this designation is 1.00.

Zoning Designation

The project site is zoned *ML - Light Industrial*. The *ML – Light Industrial* zoning designation (Chapter 18.48 of the City Code) is intended for (but not limited to) commercial storage and wholesale distribution warehouses, plants and facilities for the manufacturing, processing, and repair of equipment and merchandise, and retail sales of industrial products, and uses of a similar nature. Retail commercial and service uses, kennels, and lumber yards (and other similar uses) may also be allowed as a conditional use with City approval of a Use Permit. The maximum permitted building height within this zone is 70 feet and the maximum building coverage is 75 percent.

San José International Airport

The project site is located approximately 1.6 miles north of the San José International Airport, and is located within the Airport Influence Area defined by the Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan (CLUP) for the San José International Airport. Development within the Airport Influence Area (AIA) can be subject to hazards from aircraft and also pose hazards to aircraft travelling to and from the airport. The AIA is a composite of areas surrounding the airport that are affected by noise, height and safety considerations. These hazards are addressed in Federal and State regulations as well as in land use regulations and policies in the CLUP. The most recent CLUP for the Airport was adopted in 2011.

The project site is located within Part 77 Surface zone 212, which limits the building height to a maximum of 212 feet above mean seal level.[27]

[27] Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan.* Figure 7. Amended November 16, 2016.

4.10.1.2 *Surrounding Land Uses*

The site is bounded by Agnew Road to the north, Mission College Boulevard to the south, an office/R&D building to the east, and a maintenance path adjacent to San Tomas Aquino Creek to the west. Surrounding land uses consist mainly of light industrial and office/R&D uses in the industrial-style building adjacent to the site. An office building is under construction across Mission College Boulevard, directly south of the project site. An electric substation and a multifamily residential development are located north of the site across Agnew Road.

4.10.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Physically divide an established community?	☐	☐	☐	☒	1,2
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	1,2
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	1,2

4.10.2.1 *Land Use Impacts*

Impacts to an Established Community

The project site is located in an industrial area surrounded by industrial development and residential uses. It would not include any physical features that would physically divide the community (e.g., blocking of roadways or sidewalks) and would not interfere with the movement of residents through a neighborhood. For these reasons, construction of the proposed project would not divide an established community. **(No Impact)**

Consistency with Applicable Local Plans, Policies, and Regulations

Santa Clara General Plan

The project site is designated Low-Intensity Office/R&D under the City's General Plan. As described previously, free standing data centers are permitted in this designation. Therefore, the proposed project is consistent with the General Plan land use designation on the site.

The project area consists of a mix of uses including industrial, office/R&D, commercial, and residential. A recreational trail is also located on the west bank of San Tomas Creek. The proposed data center would be compatible with the surrounding industrial land uses and would not interfere

with the existing operations of adjacent or nearby businesses. Activities and equipment at the site would be separated from residential uses by Agnew Road and setbacks of 54 feet and 630 feet to noise generating equipment in the electrical and backup battery equipment yard and generator yard, respectively. In addition, there would be acoustical enclosures and walls that would reduce noise levels at both residential properties lines and along the trail.

Noise and lighting levels associated with the proposed project would not substantially increase over existing levels and are not anticipated to adversely affect adjacent residential properties or adjacent areas of the San Tomas Aquino corridor (see *Section 4.4 Biological Resources*). The proposed project, therefore, would not introduce a land use to the site that would create a land use compatibility conflict in the project area.

City of Santa Clara City Code

As stated above, the project site is zoned *ML – Light Industrial* (Chapter 18.48 of the City Code), which accommodates industries operating substantially within an enclosed building. The permissible uses include (but not limited to) commercial storage and wholesale distribution warehouses, plants and facilities for the manufacturing, processing, or repair of equipment and merchandise, and retail sales of industrial products, and uses "of a similar nature". Any uses permitted within the *MP – Planned Industrial* zoning designation are also allowed. The City has routinely approved of data centers as a use consistent with the *ML* zoning designation.

Noise generated by the project would not exceed restrictions in the City's zoning ordinance (see Section 4.12 *Noise*).

The proposed project, therefore, would not conflict with the City's General Plan or Zoning Ordinance. **(Less than Significant Impact)**

Consistency with the San José International Airport Comprehensive Land Use Plan

The project site is located within the AIA of the San José International Airport and within the 65 CNEL noise contour for aircraft overflights. It is not located within any safety zones that extend to the northwest from the end of the airport runways. Potential conflicts related to the building height or aircraft noise are discussed in Section 4.8 *Hazards and Hazardous Materials* and Section 4.12 *Noise*, respectively.

4.10.2.2 *Consistency with Applicable Habitat Conservation Plan*

The project site is not located within a habitat conservation plan or natural community conservation plan. **(No Impact)**

4.10.3 Conclusion

The project would not result in significant land use impacts. **(Less Than Significant Impact)**

4.11 MINERAL RESOURCES

4.11.1 Environmental Setting

The City of Santa Clara is located in an area zoned MRZ-1 for aggregate materials by the State of California. MRZ-1 zones are areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. The area is not known to support significant mineral resources of any type. No mineral resources are currently being extracted in the City. The State Office of Mine Reclamation's list of mines (AB 3098 list) regulated under the Surface Mining and Reclamation Act does not include any mines within the City.

4.11.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	☐	☐	☐	☒	1,2
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	1,2

4.11.2.1 *Mineral Resources Impacts*

The project would not result in the loss of availability of a known mineral resource, and no mineral excavation sites are present with the general area. The proposed project, therefore, would not result in impacts to mineral resources. **(No Impact)**

4.11.3 Conclusion

The project would not result in impacts to known mineral resources. **(No Impact)**

4.12 NOISE AND VIBRATION

The following discussion is based, in part, on a Noise Assessment Study prepared by *Mei Wu Acoustics,* in June 2017. A copy of this report is attached to this Initial Study as Appendix G.

4.12.1 Environmental Setting

4.12.1.1 *Regulatory Framework*

Norman Y. Mineta San José International Comprehensive Land Use Plan

The Santa Clara County Airport Land Use Commission has adopted a Land Use Compatibility table for projects in the vicinity of Norman Y. Mineta San José International Airport. Under the ALUC's land use compatibility noise policies, industrial uses are compatible in noise environments (from aircraft overflights) that are 70 CNEL or less. The site is located in area between the 65 and 70 CNEL airport noise contours on the CLUP noise map.

City of Santa Clara

General Plan

The City of Santa Clara General Plan identifies noise and land use compatibility standards for various land uses (General Plan Table 5.10-2). The noise standard is 70 CNEL for industrial land uses and 55 dBA CNEL for residential land uses.

City Code

Chapter 9.10 "Regulation of Noise and Vibration," of the City of Santa Clara City Code identifies allowable hours for construction to limit impacts to sensitive uses. The nearest sensitive receptors to are the residences across Agnew Road, approximately 115 feet north of the project site. The project, therefore, is subject to the City Code regulations on construction hours.

The City Code also includes standards for maximum noise levels at nearby properties from noise generated on a subject property. Noise limits at the nearest adjacent property lines to the project sit are shown in Table 4.12-1, below.

Table 4.12-1
Noise Limits at Adjacent Property Lines

Adjacent Property Line	Daytime Noise Limit (dBA)	Nighttime Noise Limit (DBA)
North - Residential	55	50
West – Public/Quasi Public	55	50
East – Light Industrial	70	70
South – Planned Development	65	60

Section 9.10.060(c) states: "If the measured ambient noise level at any given location differs from those levels set forth in SCCC 9.10.040, Schedule A, the allowable noise exposure standard shall be adjusted in five dBA increments in each category as appropriate to encompass or reflect said ambient noise level."

4.12.1.2 *Noise Background*

Noise is defined as unwanted sound. Noise can be disturbing or annoying because of its pitch or loudness. Pitch refers to the relative frequency of vibrations, higher pitch signals sound louder to people.

A decibel (dB) is measured based on the relative amplitude of a sound. Ten on the decibel scale marks the lowest sound level that a healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis such that each 10 decibel increase is perceived as a doubling of loudness. The California A-weighted sound level, or dBA, gives greater weight to sounds to which the human ear is most sensitive. L_{max} and L_{eq} are used to define the maximum and average A-weighted noise levels during a measurement period, respectively.

Sensitivity to noise increases during the evening and at night because excessive noise interferes with the ability to sleep. To emphasize quiet-time noise events, the Day/Night Average Sound Level (DNL or L_{dn}) and Community Noise Equivalent Level (CNEL) were developed to measure the average cumulative noise exposure over a 24-hour period. Both DNL and CNEL include a 10 dB addition to noise levels from 10:00 PM to 7:00 AM to account for human sensitivity to night noise, while CNEL also includes a 5 dB addition to noise generated between 7:00 PM and 10:00 PM.

4.12.1.3 *Existing Noise Environment*

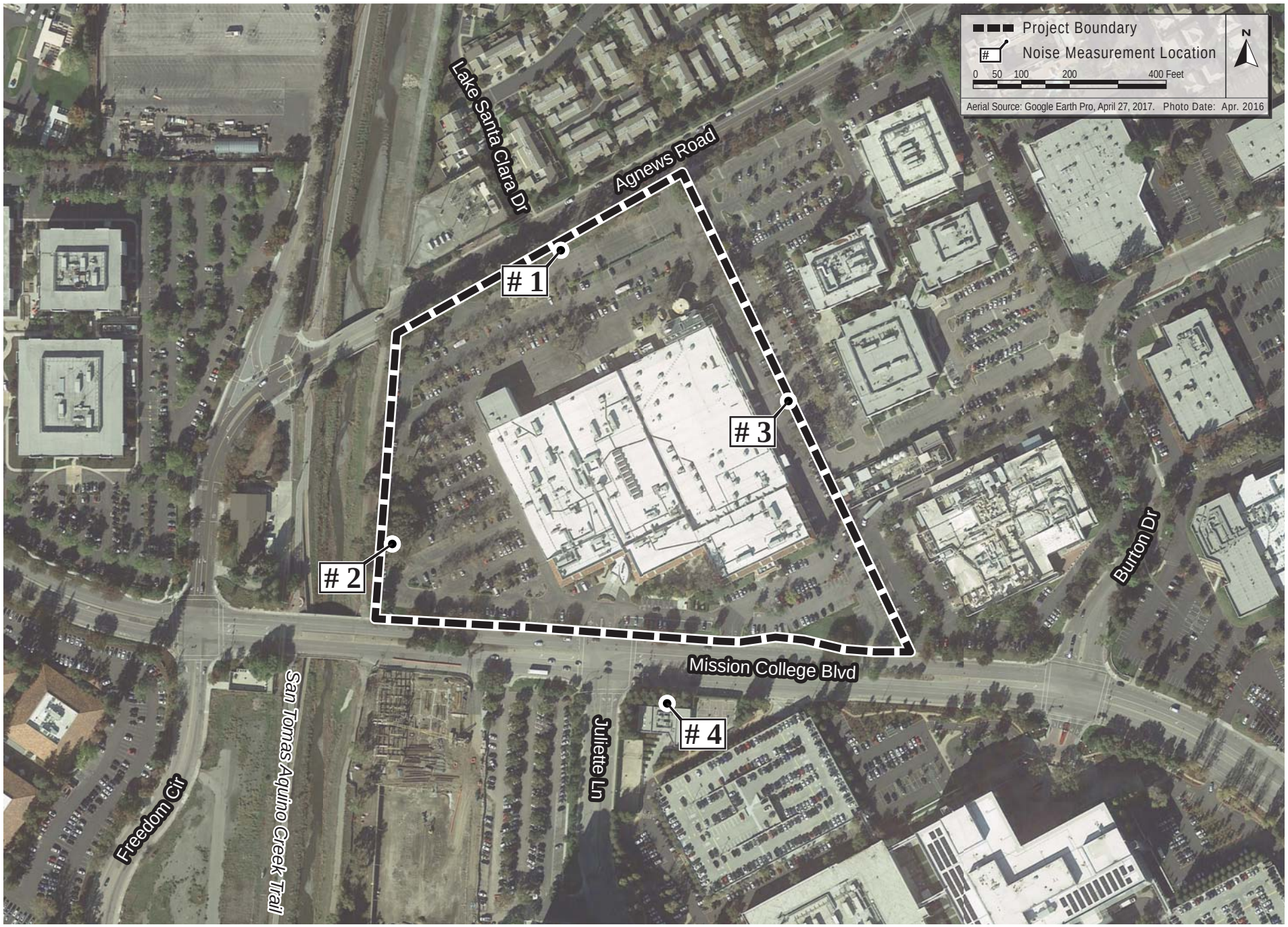
The project site is surrounded by industrial, commercial, office/R&D, and residential uses. The predominant ambient noise sources are attributed to the automobile traffic on Mission College Boulevard and US 101, and from aircraft arriving to and departing from the Norman Y. Mineta San José International Airport. Additional ambient sounds in the area included construction activity occurring in the planned development area to the south of the project site.

Measurements of existing ambient noise levels were taken in April 2017 and are listed in Table 4.12-1, below. The noise measurement locations are shown on Figure 4.12-1. Location 1 was at the north property line of the site on Agnew Road. Location 2 was taken at the western property line, adjacent to San Tomas Aquino Creek and public space. Location 3 was at the eastern property line, adjacent to commercial property, and Location 4 was taken at the southern property line along Mission College Boulevard and across from the planned development. The measurements were taken for a total period of 24-hours in one-minute intervals.

Table 4.12-2
Existing Ambient Noise Levels

Measurement Location	Ambient Level (Median L_{90}) [dBA]	Day-Night Average Noise Level (L_{dn}) [dBA]
1. Agnew Road	56.3	71.6
2. Public Space	55.2	64.9
3. Offices	51.9	64.8
4. Mission College Blvd.	56.2	70.8

Source:
Mei Wu Acoustics, April 2017.



NOISE MEASUREMENT LOCATIONS

FIGURE 4.12-1

4.12.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project result in:					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐	1,2,15
b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	1,2,15
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	1,2,15
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	1,2,15
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐	1,2,15
f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	1,2,15

4.12.2.1 *Noise Impacts from Operation of Data Center*

The project site is located in an area consisting primarily of office/R&D and industrial uses. Ambient noise is predominantly from traffic on Mission College Boulevard, construction occurring in the planned development area to the south of the project site, and airplane noise from the Norman Mineta San José International Airport. The nearest sensitive receptors are approximately 115 feet from the northern property line across Agnew Road.

Conformance with City Code Standards

Operation of Mechanical Equipment

Table 4.12-3 below shows the sound pressure levels at the nearest sensitive receiver at each of the property lines during normal project operations. Normal operations of the data center includes all outdoor equipment except the generators.

Table 4.12-3
Calculated Sound Pressure Levels at Receiver Locations from Mechanical Equipment other than Generators

Receptor Description	Sound Pressure Level (Steady-state) [dBA]
Residential to North	50
Public/Quasi Public to West	47
Light Industrial to East	56
Planned Development to South	49

The sound pressure levels at each receiver location in Table 4.12-3 represent a scenario where all outdoor equipment is running simultaneously, with the exception of the emergency generators. The resulting noise levels at each of the property lines would not exceed the Santa Clara Municipal Code requirements and would therefore result in a less than significant impact. **(Less Than Significant Impact)**

Combined Operation of Emergency Generators and Mechanical Equipment

Operation of the proposed data center facility would require testing and maintenance of the 120 emergency backup generators as well as associated battery equipment in the switchgear yard. The generators would be configured in 24 powerblocks containing five generators each. The generator yard would be fully enclosed by a monolithic barrier ranging from 21 feet in height on the north, south, and east sides, to 26 feet in height on the west side (see Figure 3.0-1).[28] The barriers would be constructed of material with at least two lbs/sf surface density.

Emergency equipment such as backup generators are not required to meet noise codes during emergency operation [per section 9.10.070 (a) of the Santa Clara City Code]. Therefore, the emergency equipment will be required to meet the noise code only during routine testing. The project would test a maximum of nine generator powerblocks (45 generators) simultaneously. To determine the maximum noise levels generated by the project, this analysis assumes all other mechanical equipment on the site would be operating while up to 45 generators are tested simultaneously. The testing would be conducted between the hours of 7:00 AM and 10:00 PM. Under this scenario, noise levels could exceed limits established in the City Code at the property line of the property to the west (i.e. Fire Station No. 8).

Impact NOI-1: Project operation could exceed requirements established in the City Code for noise levels at adjacent properties during generator testing. **(Significant Impact)**

Mitigation Measures:

MM NOI-1: Emergency Generator Testing. No more than nine powerblocks (45 generators) located on the western boundary of the generator yard may be tested simultaneously.

[28] Monolithic barriers do not have holes or gaps.

MM NOI-2: Noise attenuation measures will be subject to demonstration of effectiveness in meeting the City's noise standards, to the satisfaction of the City's Planning Division, prior to approval of building permits.

With implementation of MM NOI-1 and MM NOI-2, noise levels at adjacent property lines during generator testing would be below the requirements established in the City Code. **(Less Than Significant Impact With Mitigation Incorporated)**

General Plan Land Use Compatibility and Change in Ambient Noise Levels

The CEQA Guidelines state that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project would substantially increase existing noise levels at noise-sensitive receivers on a permanent or temporary basis. CEQA does not define what noise level increase would be substantial. The General Plan defines a change of three dBA L_{dn} as noticeable, five dBA L_{dn} as distinct change in noise level.[29] Typically, project generated noise level increases of three dBA L_{dn} or greater are considered significant where resulting exterior noise levels would exceed the normally acceptable noise level standard. Where noise levels would remain at or below the normally acceptable noise level standard with the project, a noise level increase of five dBA L_{dn} or greater is considered significant.

Table 4.12-4 below shows the change in ambient noise levels at each of the adjacent property lines resulting from the project.

Table 4.12-4
Change in Ambient Noise Levels

Receptor Description	Existing L_{dn}	Projected L_{dn}	Projected Increase in L_{dn}
Residential to North	71.6	71.7	0.1
Public/Quasi Public to West	64.9	65.3	0.4
Light Industrial to East	64.8	66.5	1.7
Planned Development to South	70.8	70.9	0.1

As shown in Table 4.12-4, the project would not result in significant increases in ambient noise levels at adjacent receptors. **(Less Than Significant Impact)**

4.12.2.3 *Noise Impacts from Project Traffic*

Traffic generated by the project would not represent a doubling of traffic on any neighboring streets and traffic noise from the project would not result in a substantial increase in ambient noise levels. The noise produced by the proposed project, therefore, would not result in significant noise impacts.

[29] City of Santa Clara. *City of Santa Clara 2010-2035 General Plan, Section 8.14.1 Noise Measurement*. 2010.

4.12.2.4 *Noise Impacts from Construction*

Construction of the project , over a period of 15 months, would generate noise, and would temporarily increase noise levels at adjacent commercial and residential land uses. The significance of noise impacts during construction depends on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. The demolition of the existing building and the construction of the proposed project would generate noise and would temporarily increase noise at adjacent businesses.

Construction activities generate considerable amounts of noise, especially during the demolition phase and the construction of project infrastructure when heavy equipment is used. Typical hourly average construction generated noise levels are about 75 dBA to 80 dBA measured at a distance of 100 feet from the source during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Construction generated noise levels drop off at a rate of about six dBA per doubling of distance between the source and receptor.

Construction noise impacts are more significant when construction occurs during noise-sensitive times of the day (early morning, evening, or nighttime hours near residential uses), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction lasts extended periods of time. Compliance with City Code requirements for construction (listed below) would reduce impacts from construction activities on the project site.

- Construction and demolition activities shall be limited to the period between 7:00 AM and 6:00 PM Monday through Friday and 9:00 AM to 6:00 PM on Saturdays. No construction or demolition activities are permitted on Sundays or holidays.

- Construction crews will be required to use available noise suppression devices and properly maintain and muffle internal combustion engine-driven construction equipment.

- The applicant shall designate a disturbance coordinator and post the name and phone number of this person at easy reference points for the surrounding land uses. The disturbance coordinator shall respond to and address all complaints about noise.

Compliance with City Code requirements during construction activities on the project site would result in a less than significant construction noise impact. **(Less Than Significant Impact)**

4.12.3 Conclusion

With implementation of mitigation measures and City Code requirements, the project would result in less than significant noise and vibration impacts. **(Less Than Significant Impact)**

4.13 POPULATION AND HOUSING

4.13.1 Environmental Setting

According to the California Department of Finance data, the City had a population of approximately 123,983 residents as of January 1, 2017.[30] The Association of Bay Area Governments) projects the Santa Clara population to be 127,080 in 2025[31].

The job/housing ratio quantifies the relationship between the number of housing units required as a result of local jobs and the number of residential units available in the City. When the ratio reaches 1.0, a balance is struck between the supply of local housing and local jobs. The jobs/housing ratio is determined by dividing the number of local jobs by the number of employed residents that can be housed in local housing. The City of Santa Clara has fewer employed residents than jobs with a ratio of approximately two jobs per employed resident.[32] Accordingly, most employees within the City are required to seek housing outside of the community. ABAG estimates that the City of Santa Clara had 112,460 jobs in 2010 and will have 145,560 jobs by 2040.[33]

4.13.1.1 *Existing Conditions*

The project site is developed with a 358,000 sf industrial building. There are no residences on-site.

4.13.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	1,2
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	1,2
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	1,2

The project would demolish the existing office/R&D building and associated parking lot on the site to construct a 495,660 sf data center. There would be up to 30 employees on the site at any given time, with three daily shifts. Approval of the project would not substantially increase jobs in the City. The proposed project would not induce substantial population growth in the City or

[30] State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2016 and 2017. May 2015.
[31] Association of Bay Area Governments: Forecasts for the San Francisco Bay Area to the Year 2035. April 2009.
[32] Based on the ABAG-projected 106,750 jobs in 2010 and Santa Clara General Plan Housing Element.
[33] Association of Bay Area Governments. *2010-2040 Jobs Housing Connection Strategy.* Page 97. May 17, 2012.

substantially alter the City's job/housing ratio, and would therefore result in a less than significant population and housing impacts. **(Less Than Significant Impact)**

The project would not displace housing or residents. **(No Impact)**

4.13.3 Conclusion

The proposed project would not result in significant population or housing impacts. **(Less Than Significant Impact)**

4.14 PUBLIC SERVICES

4.14.1 Environmental Setting

4.14.1.1 *Fire Service*

Fire protection services for the project site are provided by the City of Santa Clara Fire Department (SCFD). The SCFD consists of 10 stations distributed throughout the City. The closest fire station to the project site is Station 8, located at 2400 Agnew Road, which is approximately 0.2 miles west of the project site.[34]

4.14.1.2 *Police Service*

Police protection services are provided by the City of Santa Clara Police Department (SCPD). Police headquarters are located at 601 El Camino Real, approximately four miles southeast of the project site.

4.14.1.3 *Parks and Schools*

The closest neighborhood park to the project site is Agnew Park, located approximately 0.7 miles northeast of the project site.

The nearest schools to the project site are Kathryn Hughes Elementary School, located at 4949 Calle de Escuela (approximately 1.8 miles northeast of the project site), Don Callejon K-8 school, located at 4176 Lick Mill Boulevard (approximately 1.9 miles east of the project site), and Santa Clara High School, located at 3000 Benton Street (approximately 4.3 miles south of the project site).

[34] City of Santa Clara Fire Department. Accessed: March 9, 2017. Available at: http://santaclaraca.gov/government/departments/fire/about-us.

4.14.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
- Fire Protection?	☐	☐	☒	☐	1,2
- Police Protection?	☐	☐	☒	☐	1,2
- Schools?	☐	☐	☐	☒	1,2
- Parks?	☐	☐	☒	☐	1,2
- Other Public Facilities?	☐	☐	☐	☒	1,2

4.14.2.1 *Public Services Impacts*

The proposed project is the demolition of an existing 358,000 sf office/R&D building and associated parking lot and the construction of a 495,610 sf data center building, parking lot, electric substation, and equipment yards. The proposed development on the project site would be reviewed by the City of Santa Clara Police and Fire Departments before project approval. The project would be constructed in conformance with current codes, including features that would reduce potential fire hazards and increase security. The proposed project may result in an incremental increase in the need for police and fire services associated with increased building area (but lower employment), but would not require the construction of new facilities or stations.

The proposed project would not generate substantial population growth in the project area or result in the use of public facilities in the City by new residents. Some employees at the project site may visit local parks, however, it is not anticipated that this use would create the need for any new facilities or adversely impact the physical condition of existing facilities.

The proposed project is located 1.8 miles from the closest school site and would not generate new students. The project, therefore, would not result in an increase in school population or result in the need for new school facilities, or modifications to school facilities, that could result in significant environmental impacts. **(Less Than Significant Impact)**

4.14.3 Conclusion

The project would not result in significant impacts to public facilities. **(Less Than Significant Impact)**

4.15 RECREATION

4.15.1 Environmental Setting

The City of Santa Clara Parks & Recreation Department (Department) provides parks and recreational services in the City. The Department is responsible for maintaining and programming the various parks and recreation facilities, and works cooperatively with public agencies in coordinating all recreational activities within the City. Overall, as of June 2017, the Department maintains and operates Central Park, a 45.04-acre community park, 25 neighborhood parks (122.67 acres), four mini parks (2.59 acres), public open space (16.13 acres improved and 40.08 acres unimproved resulting in 56.21 acres), recreational facilities (14.76 acres improved, 9.04 acres unimproved and excluding Santa Clara Golf and Tennis Club/BMX resulting in 23.8 acres), recreational trails (7.59 acres and joint use facilities (48.52 acres) throughout the City totaling approximately 257.3 improved acres. Community parks are over fifteen acres, neighborhood parks are one to fifteen acres and mini parks are typically less than one acres in size.

The Department of Parks and Recreation also maintains a strong recreational program that supports a wide variety of activities. The Community Recreation Center, is the hub of the City's recreation programs. The area in Central Park west of Saratoga Creek contains group and individual picnic facilities, playgrounds, restroom facilities, an amphitheater, two lighted tennis courts, basketball courts, and the Veterans Memorial. East of the creek is the world famous George F. Haines International Swim Center, Bob Fatjo Sports Center which includes the Tony Sanchez Field as well as a second lighted softball field, the Santa Clara Tennis Center with eight lighted tennis courts and a practice wall, open space, a lake, large group picnic areas, restroom facilities, a lawn bowling green, and an exercise course.

In addition to the parklands and facilities within Central Park, the City currently has a gymnastics center, a bicycle track, a dog park, golf and tennis club, a youth activity center, a teen center, a senior center, and a skate park. The City's recreational system is augmented by local school facilities, which are available to the general public after school hours.

The closest neighborhood park to the project site is Agnew Park, approximately 0.7 miles northeast of the project site.

4.15.2 Checklist and Discussion of Impacts

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	☐	☐	☒	☐	1,2
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	1,2

The proposed project would not increase employment. Although employees may use nearby parks and recreational facilities, this would not have an impact on these facilities such that adverse physical effects would result.

4.15.3 Conclusion

The proposed project would not result in significant impacts to parks and recreational facilities. **(Less Than Significant Impact)**

4.16 TRANSPORTATION/TRAFFIC

4.16.1 Environmental Setting

4.16.1.1 *Regional and Local Roadway Access*

Regional Access

Regional access to the project site is provided via State Route 237 (SR 237), Highway 101 (US 101), and Interstate 880 (I-880) as described below.

SR 237 provides access to the project site via Great America Parkway. SR 237 is a regional east/west freeway with two lanes in each direction, extending from I-680 in Milpitas to El Camino Real in Mountain View.

US 101 provides access to the project site via Montague Expressway and Great America Parkway. US 101 is a regional north/south freeway with six mixed-flow lanes and two high occupancy vehicle lanes in the project area. US 101 extends through the entire Bay Area north of San Francisco and south of San José.

I-880 provides access to the project site via a full interchange at Montague Expressway. I-880 is a regional north/south freeway with three mixed-flow lanes that extends from San José to Oakland.

Local Access

Local access to the project site is provided via Lafayette, Mission College Boulevard, and Agnew Road. These roadways are described below.

Lafayette Street is a four-lane roadway between SR 237 and Poplar Street and provides access to the project site via Mission College Boulevard and Agnew Road.

Mission College Boulevard is a four- to five-lane roadway between Great American Parkway and Montague Expressway that provides direct access to the project site.

Agnew Road is a two-lane roadway between Lafayette Street and Mission College Boulevard that provides direct access to the project site.

4.16.1.2 *Bicycle and Pedestrian Facilities*

Bicycle Facilities

There are Class II bicycle facilities along Agnew Road and Mission College Boulevard.

Pedestrian Facilities

Pedestrian access to the site is provided by sidewalks on the site's southern frontage on Mission College Boulevard. No sidewalk currently exists on the site's northern frontage on Agnew Road.

4.16.1.3 *Transit Service*

Existing transit service to the project areas is provided by the Santa Clara Valley Transportation Authority (VTA). Bus stops are located on Mission College Boulevard, at the driveway entrance on Mission College Boulevard. The VTA bus service is described below.

Local routes 60, 140, 321, 330, and 827 provide bus service to the Mission College Boulevard and Burton Drive bus stop, which is located on the site's southern frontage on Mission College Boulevard.

4.16.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐	1,2
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	1,2
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	1,2
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☒	☐	1,2
e) Result in inadequate emergency access?	☐	☐	☒	☐	1,2
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐	1,2

4.16.2.1 *Site Access*

Access to the site would be provided by a driveway on Mission College Boulevard where it intersects with Juliette Lane. The driveway would be approximately 62 feet in width, and would be in the same location at the existing primary driveway entrance to the current development on the site. A secondary driveway entrance for emergency access would be constructed on Agnew Road in the western portion of the site and would be approximately 30 feet in width. The project would remove two existing driveways, one on Agnew Road at the site's southeastern corner and one on Mission College Boulevard at the site's northeastern corner (refer to Figure 3.0-1).

4.16.2.2 *Trip Generation Estimates*

Up to 30 employees would be present on the site at any given time, and approximately 25 clients/visitors would travel to the site on a daily basis. This would be a decrease from the number of employees and visitors at the existing building on-site.

Trip generation rates for the project were based on the Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition's trip generation rates for data centers (land use code 160), which use rates based on actual survey data. Based on ITE rates, the project would generate an estimated total of 45 weekday AM peak hour trips and 45 weekday PM peak hour trips, while the existing office/R&D use on the site generates 437 AM peak hour trips and 383 PM peak hour trips. The project would result in a net reduction in trip generation and, therefore, would not significantly impact adjacent roadways or result in transportation level of service impacts to signalized intersections or freeway segments. **(Less Than Significant Impact)**

As described in *Section 4.3.2.2*, the project site is located within Transportation District 1 and is required to have a 25 percent VMT reduction, 10 percent coming from a transportation demand management program. The project would implement a TDM program that would include measures such as: electric car charging stations, secure bicycle parking facilities, preferred carpool and vanpool parking, and facilitation of ride sharing services. With implementation of the TDM, the project would reduce the number of trips generated by approximately 25 percent, the project would further reduce trips generated, resulting in a less than significant impact. **(Less Than Significant Impact)**

4.16.2.3 *Impacts to Bicycle and Pedestrian Facilities*

Pedestrian access to the site is provided by sidewalks on the site's southern frontage on Mission College Boulevard. No sidewalk currently exists on the site's northern frontage on Agnew Road. The project would install a new sidewalk on the project's frontage with Agnew Road and would improve the existing sidewalk on the project's frontage on Mission College Boulevard. The project, therefore, would not conflict with pedestrian circulation in the area.

The project would remove one driveway on Mission College Boulevard and install a new wider driveway at the signalized Mission College Boulevard/Juliette Lane intersection. Modifications to site access along the project frontage would not conflict with bicyclists use of the existing Class II bike lanes on Mission College Boulevard. **(Less Than Significant Impact)**

4.16.2.4 *Transit Impacts*

VTA, Caltrain, and ACE provide transit service within the project vicinity. Local VTA routes 60, 140, 321, 330, and 827 provide access to the project site along Mission College Boulevard and Juliette Lane. There are adequate pedestrian pathways connecting the project site to the bus stops.

Due to the low number of employees and visitors expected at the proposed data center, the project would not adversely impact levels of service at nearby transit, pedestrian, or bicycle facilities. **(Less Than Significant Impact)**

4.16.2.5 *Parking Impacts*

The project would demolish the existing parking lot and construct a 75-space parking lot. Per the City of Santa Clara City Code, light industrial uses must provide one parking space per 750 sf of gross floor area or one space per three employees on the shift during which the greatest number of employees is used, whichever is greater. Based on this requirement, the size of the building would require 661 parking spaces.

The City acknowledges that data centers require less parking than typical light industrial uses due to the low number of employees and visitors utilizing the site. The project, therefore, will be permitted to defer installation of some of the parking spaces that would ordinarily be required for light industrial uses while the proposed data center is in operation. However, the project will be required to provide an area undeveloped with permanent structures that is large enough to accommodate 661 parking spaces in the event that the land use on the site changes to something other than a data center use in the future. The equipment yard areas to the west and north of the proposed data center buildings would serve as the locations of future parking areas. Prior to project approval, the applicant will be required to submit a plan to the City demonstrating that the site could accommodate 661 parking spaces in order to meet the requirements of the City Code.

4.16.2.6 *Other Transportation Issues*

Air Traffic Patterns

The project site is located approximately 1.6 miles north of the San José International Airport. The proposed project would not result in a change in air traffic patterns or obstruct airport operations. **(No Impact)**

Emergency Access

Emergency access would be provided to the site via the two proposed driveways; one on Mission College Boulevard and the other on Agnew Road. The City of Santa Clara standards require two-way driveways providing access to all properties be a minimum width of 22 feet (20-foot pavement with one-foot clearance on each side). The main driveway on Mission College Boulevard would be 62.5-foot wide and the driveway entrance on Agnew Road would be 30 feet wide.

The final site design would be required to be consistent with regulatory requirements for fire truck access. **(Less Than Significant Impact)**

4.16.3 Conclusion

The proposed project would have adequate parking and would not result in significant transportation impacts. **(Less Than Significant Impact)**

4.17 UTILITIES AND SERVICE SYSTEMS

The discussion in this section is based in part upon a Water Supply Assessment prepared by the City of Santa Clara in October 2017 and a Sanitary Sewer Capacity Evaluation prepared by *RMC Water and Environment* in January 2018. Copies of these reports are included as Appendices H and I, respectively.

4.17.1 Environmental Setting

4.17.1.1 *Water Service*

Potable Water

Water services to the site are provided by the City of Santa Clara Department of Water and Sewer Utilities. The water system consists of more than 335 miles of water mains, 27 active water wells and seven storage tanks with 28.8 million gallons of water storage capacity.[35] Drinking water is provided by an extensive underground aquifer (accessed by the City's wells) and by two wholesale water importers: the Santa Clara Valley Water District (imported from the Sacramento-San Joaquin Delta) and the San Francisco Hetch-Hetchy System (imported from the Sierra Nevada). About 30 percent of the City's water comes from these imported treated water supplies. The remaining 70 percent is pumped from the City's system of 26 active water wells.[36] The three sources are used interchangeably or are blended together. In 2015, the Water Utility had approximately 25,715 water service connections with an average potable water demand of 16.8 MGD potable water and 3.2 MGD recycled water demand.[37]

The existing water use on-site is approximately 10,683 gallons per day (gpd).[38]

Recycled Water

Tertiary treated (or 'recycled') water serves as a fourth source of water supply and comprises approximately 16.7 percent of the City's overall water supply (in 2015). Recycled water is supplied from South Bay Recycled Water, which provides advanced tertiary treated water from the San Jose—Santa Clara Regional Wastewater Facility (formerly known as the San Jose/Santa Clara Water Pollution Control Plant). The City of Santa Clara recycles approximately one percent of its water through non-potable uses by businesses, industries, parks, and schools along pipeline routes. The City's recycled water program delivers recycled water throughout the City for landscaping, parks, public services and businesses. The nearest recycled water lines are located in Mission College Boulevard.[39]

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[35] City of Santa Clara. *2015 Urban Water Management Plan, City of Santa Clara Water Utility*. Page 12. Adopted November 2016. Accessed: January 25, 2017. Available at: http://santaclaraca.gov/index.aspx?page=1984.
[36] *Ibid.*
[37] *Ibid.*
[38] City of Santa Clara. 2305 Mission College Boulevard Development Application – Water Supply Assessment for Compliance with California Water Code Section 10910. October 2017.
[39] City of Santa Clara. *Recycled Water System Map. City of Santa Clara, California.* Updated July 2012. Accessed: March 23, 2017. Available at: http://santaclaraca.gov/home/showdocument?id=14883.

4.17.1.2 *Wastewater*

Wastewater from the City of Santa Clara is treated at the San José – Santa Clara Regional Wastewater Facility. The Regional Wastewater Facility is owned jointly by the two cities and is operated by the City of San José's Department of Environmental Services. The facility is one of the largest advanced wastewater treatment facilities in California and serves over 1,400,000 people in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. [40] The Regional Wastewater Facility provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 million gallons of wastewater a day.

The Regional Wastewater Facility is currently operating under a 120 mgd dry weather effluent flow constraint. This requirement is based upon the State Water Resources Control Board and the Regional Water Quality Control Board concerns over the effects of additional freshwater discharges from the Regional Wastewater Facility on the saltwater marsh habitat, and pollutant loading to the Bay. Approximately ten percent of the facility's effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay. The NPDES permit for the Regional Wastewater Facility, which includes wastewater discharge requirements, was issued in 2014 and is valid through 2019.

Wastewater from the existing building on the site currently discharges to a 12- and 18-inch sanitary sewer line that flows eastward along Agnew Road. The flow then turns north along Lafayette Street and continues north on the 33, 36, and 42-inch sewers to pump stations, where it is then conveyed to the San José/Santa Clara Regional Wastewater Facility. Sanitary sewer lines that serve the project site are maintained by the City of Santa Clara Sewer Utility.

4.17.1.3 *Storm Drainage*

The City of Santa Clara owns and maintains the municipal storm drainage system which serves the project site. Stormwater from the site is conveyed in a 24-inch storm drain pipe in Agnew Road.

4.17.1.4 *Solid Waste*

Solid waste collection in the City of Santa Clara is provided by Mission Trail Waste System through a contract with the City. The City has an arrangement with the owners of Newby Island Landfill, located in San José, to provide disposal capacity for the City of Santa Clara through 2024. Recycling services are provided through Stevens Creek Disposal and Recycling.

4.17.1.5 *Natural Gas and Electricity Services*

Electric service is provided to the site by Silicon Valley Power and natural gas is provided by Pacific Gas and Electric (PG&E).

[40] City of Santa Clara. *San Jose-Santa Clara Regional Wastewater Facility*. Accessed: February 1, 2018. Available at: http://www.sanjoseca.gov/index.aspx?NID=1663 .

4.17.2 Checklist and Discussion of Impacts

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐	1,2,17
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	1,2,16,17
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	1,2
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐	1,2,16
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐	1,2,17
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	1,2

4.17.2.1 *Water Supply*

Based on the Water Supply Assessment prepared by the City, the proposed project would use approximately 228.4 acre feet per year (AF/yr) of potable water, equivalent to approximately 203,874 gpd.[41] This represents an increase of approximately 216.4 AF/yr, equivalent to approximately 193,191 gpd.

The City has determined that the proposed development and the projected increase in water demand is consistent with the growth projections and future water demand assumed in the preparation and analysis of the City's 2015 Urban Water Management Plan (UWMP). The City's 2015 UWMP concluded that sufficient water supplies are available to meet the project demand. As such, there is a sufficient water supply to serve the project site under normal water year (non-drought) conditions.

In addition to normal water years, the WSA and UWMP assessed the ability of Santa Clara to meet forecasted water demands (including the proposed project) during multiple dry weather (drought)

[41] City of Santa Clara. 2305 Mission College Boulevard Development Application – Water Supply Assessment for Compliance with California Water Code Section 10910. October 2017.

years. The City concluded that with projected supply totals and implementation of conservation measures consistent with its Water Shortage Contingency Plan, the retailer would be able to meet the projected demand during multiple dry water years.

Implementation of the proposed project would not have a significant impact on existing or future water supplies. **(Less Than Significant Impact)**

4.17.2.2 *Wastewater*

The San José-Santa Clara Regional Wastewater Facility (RWF) has the capacity to treat 167 million gallons of wastewater per day.[42] Currently, the RWF is operating under a 120 million gallon per day dry weather effluent flow constraints. At buildout, the proposed project will have an annual dry season wastewater flow of 37.23 million gallons per year, with a peak discharge of 17 gallons per minute. With implementation of the proposed project, the RWF would still operate below the required 120 million gallons per day constraint and would not increase the need for wastewater treatment beyond the capacity of the RWF. As a result, the RWF has the ability to treat wastewater generated by the proposed project.

Sanitary Sewer Infrastructure

Sanitary sewer lines installed on-site would connect to an existing 12- and 18-inch sanitary sewer line that drains eastward along Agnew Road. As described in the Sanitary Sewer Capacity Evaluation prepared for the project (refer to Appendix I), project implementation would result in a peak dry weather average flow of 0.102 million gallons per day, and a peak wet weather average flow of 0.025 million gallons per day. This would result in a nominal increase in wastewater flow, which would result in a less than significant impact on existing wastewater facilities that serve the project site.[43] **(Less Than Significant Impact)**

4.17.2.3 *Storm Drainage*

As discussed in Section 4.9 *Hydrology and Water Quality,* the proposed project would increase the percentage of pervious surfaces on site compared to existing conditions. Additionally, the project proposes to construct new bioswales on-site to treat runoff from adjacent impervious surfaces. The storm drainage improvements would be designed to meet City of Santa Clara Standards and would drain to the existing storm drain system. The project would not increase runoff from the site, and therefore would not exceed the capacity of the City's storm water drainage system. **(Less Than Significant Impact)**

4.17.2.4 *Solid Waste*

The City of Santa Clara has secured landfill disposal capacity for all the City's solid waste requirements until the year 2024 through an agreement with Newby Island Landfill in San José. Newby Island Landfill is currently in the process of seeking authorization from San José to expand

[42] City of San José. San José-Santa Clara Regional Wastewater Facility. Accessed: May 22, 2017. Available at: http://sanjoseca.gov/index.aspx?nid=1663.
[43] RMC Water and Environment. Sanitary Sewer Capacity Evaluation for the Project at 2305 Mission College Boulevard (APN: 104-13-096). January 16, 2018.

the permitted capacity and accept an additional 15.12 million cy and extend its closure date to 2041.[44] If the landfill is not available to accept waste, the City will prepare a contract with another landfill, such as Guadalupe Mines in San José, which is anticipated to close in 2049. In addition, the City is currently exceeding its waste diversion goal of 50 percent. The proposed data center would result in fewer employees and visitors on the site compared to the existing office/R&D use. The project, therefore, would not increase solid waste generation and could be accommodated by existing solid waste facilities. **(Less Than Significant Impact)**

4.17.2.5 *Natural Gas and Electricity Services*

The project would construct a new 90 megavolt amps (MVA) electrical substation in the northeastern portion of the site to provide electric power to the proposed data center. The three-bay substation (three 30 MVA 60 kV – 12 kV step-down transformers) would connect to existing 60 kV overhead lines located on Agnew Road. Electrical power from the substation would be distributed through 12 kV underground distribution lines. The environmental effects of construction of the substation are addressed throughout this Initial Study.

Pacific Gas and Electric (PG&E) owns natural gas distribution facilities within the City of Santa Clara. The proposed project would incrementally increase natural gas use, but would not require the construction of any additional off-site facilities. **(Less Than Significant Impact)**

4.17.3 Conclusion

The proposed project would not exceed the capacity of existing utilities and service systems or require the construction of new off-site facilities. **(Less Than Significant Impact)**

[44] Bauer, Ian. 2016. San José to Study Odors from Newby Island Landfill Before Considering Any Expansion. Mercury News, October 16, 2016.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	1-17
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐	1-17
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	1-17

4.18.1 Project Impacts

The project would not result in significant impacts to aesthetics, agricultural resources, greenhouse gas emissions, hazardous materials, geology and soils, land use, mineral resources, population and housing, public services, recreation, transportation, or utilities and service systems.

With the implementation of the mitigation and avoidance measures included in the project and described in the air quality, biological resources, cultural resources, hydrology and water quality, and noise and vibration sections of this document (refer to *Section 4 Environmental Setting, Checklist, and Discussion of Impacts*), the proposed project would not result in significant environmental impacts.

4.18.2 Cumulative Impacts

A number of projects have been recently approved, reasonably foreseeable, or are under development in the City of Santa Clara in the vicinity of the project site. These include the development or redevelopment of residential, industrial, and commercial uses. While these individual projects may result in significant impacts in particular issue areas, it is assumed that the projects will comply with existing regulations and statutes, and will incorporate mitigation and avoidance measures to reduce potential impacts to a less than significant level, if necessary. For example, all projects are required to incorporate best management practices and comply with local and regional regulations to reduce

impacts to water quality to the maximum extent feasible. With the proposed project's adherence to the Land Use, Air Quality, Energy, and Water Policies described in the City's General Plan (see *Section 4.7.2.4*), project impacts would not contribute to cumulatively considerable impacts.

4.18.2.1 *Energy Impacts*

Electricity for the proposed data center facility would be provided by Silicon Valley Power, which is the public electric utility of the City of Santa Clara. Santa Clara currently has ownership interest, or has purchase agreements for 1,392.55 MW of electricity.[45] In 2015, approximately 28.6 percent of that generation is eligible as renewable (as defined by the California Energy Commission) and an additional 15.1 percent is otherwise a non-GHG emitting resource (i.e. large-hydroelectric).[46] This capacity far exceeds City of Santa Clara's current peak electricity demand of approximately 522 MW. No new generation peak capacity is necessary to meet the capacity requirements of new construction, or redeveloped facilities within the City to meet the near or projected future demand.

4.18.2.2 *Air Quality and Greenhouse Gas Emission Impacts*

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. As described in *Section 4.3*, with the incorporation of mitigation measures, the total increase in average daily emissions of criteria pollutants from operation of the project and cumulative air toxics health hazards at the closest sensitive receptor are estimated to be below the significance thresholds used by the City of Santa Clara in this Initial Study. Adoption of project-specific mitigation would reduce potential significant impacts of routine emergency generator testing to a less than significant level. Therefore, the project, with implementation of mitigation measures included in the project, would not result in a cumulative air quality impact.

Similar to regulated air pollutants, GHG emissions and global climate change also represent cumulative impacts. The project's contribution to global climate change is discussed in *Section 4.7* in terms of the project's GHG emissions. With implementation of the efficiency measures included in the project in combination with the green power mix utilized by SVP, the project would comply with the City's Climate Action Plan, and would not conflict with plans, policies or regulation adopted for the purpose of reducing the emissions of GHGs through 2020.

4.18.3 Direct or Indirect Adverse Effects on Human Beings

As previously noted, the project could result in emissions of pollutants that could have health effects on people. With the implementation of the mitigation and avoidance measures included in the project and described in the specific sections of this report (refer to *Section 4.0 Environmental*

[45] Silicon Valley Power, City of Santa Clara. *The Silicon Valley Power Resources Map* Available at: https://siliconvalleypower.com/index.aspx?page=2022.
[46] Silicon Valley Power. *Power Content Label.* Accessed: May 10, 2017. Available at: http://siliconvalleypower.com/svp-and-community/about-svp/power-content-label

Setting, Checklist, and Discussion of Impacts) of this Initial Study, the proposed project would not result in substantial adverse effects on human beings, individually or cumulatively.

4.18.4 Conclusion

With incorporation of standard and mitigation measures described in Sections *4.1-4.17*, the proposed project would not result in a significant impact to the environment. The proposed project would not make a cumulatively considerable contribution towards a significant cumulative impact or cause adverse effects on human beings. **(Less Than Significant Impact with Mitigation Incorporated)**

Checklist Sources

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8. McClenahan Consulting, LLC. *Arborist Report.* February 20, 2017.
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13. Schaaf & Wheeler. *San Tomas Aquino 509-year and 1000-year Floodplain Analysis.* September 30, 2016.
14. Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan, Santa Clara County*. May 25, 2011.
15. Mei Wu Acoustics. *Mission College Boulevard Data Center Environmental Noise Study.* June 5, 2017.
16. City of Santa Clara. *2305 Mission College Boulevard Development Application – Water Supply Assessment for Compliance with California Water Code Section 10910*. October 2017.
17. RMC Water and Environment. *Sanitary Sewer Capacity Evaluation for the Project at 2305 Mission College Boulevard (APN: 104-13-096)*. January 16, 2018.

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SECTION 6.0 LEAD AGENCY AND CONSULTANTS

6.1 LEAD AGENCY

City of Santa Clara, Community Development Department
Gloria Sciara, Planner
Steve Le, Assistant Planner

6.2 CONSULTANTS

David J. Powers & Associates, Inc.
Environmental Consultants and Planners
Akoni Danielsen, Principal Project Manager
Michael Lisenbee, Senior Project Manager
Caroline Weston, Associate Project Manager
Zach Dill, Graphic Artist

Holman & Associates, Inc.
Sunshine Psota, Archaeologist

Illingworth & Rodkin, Inc.
James Reyff, Principal
William Popenuck

Mei Wu Acoustics
William Rosentel, Acoustical Consultant

DAVID J. POWERS & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS & PLANNERS

May 15, 2018

Steve Le
Assistant Planner
Community Development Department
1500 Warburton Avenue
Santa Clara, CA 95050

RE: Supplemental Memo for 2305 Mission College Boulevard Data Center Project

Dear Mr. Le,

The 2305 Mission College Boulevard Data Center Project Initial Study/Mitigated Negative Declaration (IS/MND) was circulated for public comment on March 2, 2018. During the circulation period, four comment letters were received. Responses to comments were provided to the City of Santa Clara prior to the Architectural Review Committee hearing on April 18, 2018.

After the project was approved at the Architectural Review Committee hearing, appeals were filed by two parties, Lozeau Drury LLP and Adams Broadwell Joseph and Cardozo. The Lozeau Drury appeal form did not raise any new issues not already addressed in the responses to comments prepared prior to the Architectural Review Committee hearing. Similarly, the appeal form from Adams Broadwell Joseph and Cardozo primarily restated their initial comments which already received responses. However, their appeal form also asserted that the City did not provide direct responses to an appendix to their comment letter. The appendix to their comment letter is a letter from Dr. Phyllis Fox that includes comments on the IS/MND. The main contents and assertions of the Fox letter were summarized in the comment letter from Adams Broadwell Joseph and Cardozo and, as such, were responded to in the responses to comments provided prior to the Architectural Review Committee hearing. A subsequent review of the Fox letter determined that all relevant assertions were responded to in the initial responses to comments, with the exception of a few specific comments that were not carried through to the comment letter from Adams Broadwell Joseph and Cardozo, as described below. This memo, which includes an attachment from the project's air quality consultant Illingworth & Rodkin, Inc., provides responses to comments in the Fox letter that previously did not receive direct responses.

Pages 14-16 of the Fox letter assert that the IS/MND did not evaluate ambient air quality impacts in the context of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The IS/MND air quality analysis followed guidance provided in the BAAQMD CEQA Air Quality Guidelines. With the exception of carbon monoxide, these guidelines do not recommend dispersion modeling to address impacts to ambient air quality standards. In developing their thresholds of significance, BAAQMD recognizes that (page 2-1)…

> "By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant."

For this reason, emission-based thresholds are used to judge a project's impact with respect to ambient air quality standards. For fugitive emissions of particulate matter from construction, the application of BAAQMD-recommended best management practices is used to judge the significance, as is appropriate.

Page 19 of the Fox letter asserts that the IS/MND used the incorrect construction length to determine average daily emissions, which is incorrect. CalEEMod predicted annual emissions in tons and those values were divided by the number of workdays, which was reported as 336 days, and converted to average daily pounds emission in pounds per day. Table 2-1 (page 2-2) of the BAAQMD CEQA Air Quality Guidelines provide the recommended thresholds, which are "Average Daily Emissions (lb/day)" for construction-related impacts. Operational impacts are based on "Average Daily Emissions (lb/day)" and "Maximum Annual Emission (tpy)."

Page 19 of the Fox letter also asserts that the IS/MND should have relied on emissions calculations for the summer period instead of the annual period. As previously stated, BAAQMD CEQA Air Quality Guidelines provide the recommended thresholds, which are "Average Daily Emissions (lb/day)" for construction-related impacts. Operational impacts are based on "Average Daily Emissions (lb/day)" and "Maximum Annual Emission (tpy)." The commenter is suggesting that maximum summer day emissions should be used to judge the significance of the impacts, which is incorrect.

Page 20 of the Fox letter asserts that the IS/MND used incorrect equipment usage assumptions when calculating construction emissions. The CalEEMod modeling used average hours per day during each construction phase. Within a construction phase, the applicant provided the number of days during that phase equipment would be used and the hours per day when it is used. Average hours per day were computed by computing the total number of hours in a construction phase and dividing it by the number of days in that phase. The average hours per phase are typically less than the average hours per day provided because the equipment would not be used every day of that particular construction phase. The IS/MND, therefore, used correct equipment usage assumptions to calculate emissions.

Lastly, pages 32-33 of the Fox letter assert that the IS/MND did not contain an analysis of cumulative impacts. This assertion is incorrect. Cumulative impacts were analyzed in Sections 4.3, 4.7, and 4.18 of the IS/MND.

As demonstrated in the initial responses to comments provided prior to the Architectural Review Committee hearing, as well as this supplemental memo, comments included in letters received during public circulation and subsequent appeal forms do not present substantial evidence supporting a fair argument that the project would result in significant unavoidable environmental impacts and, therefore, an EIR is not required for the project.

Sincerely,

Michael Lisenbee

Senior Project Manager

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M E M O

Date: May 15, 2018

To: **Michael Lisenbee**
David J. Powers and Associates
mlisenbee@davidjpowers.com

From: James A. Reyff
Illingworth & Rodkin, Inc.
1 Willowbrook Court, Suite 120
Petaluma, CA 94954

RE: 2305 Mission College Blvd Data Center Project (formerly Aligned Data Center)

SUBJECT: Response to Additional Comments on Air Quality by Adams Broadwell…
Job#17-069

This memo addresses technical comments regarding the air quality study for the 2305 Mission College Blvd Data Center Project, formerly referred to as the Aligned Data Center. This air quality study was prepared by Illingworth & Rodkin, Inc., dated April 20, 2017. Comments were made by Adams Broadwell Joseph & Cardoza, dated April 12, 2018.

This memo responds to additional comments made by Phyllis Fox, PhD, PE, dated April 7, 2018. We addressed specific comments that you requested responses, as many other comments were addressed in our responses dated April 17, 2018 or were responded by others.

These are responses to the comments:

1. Comment: Pages 14-16: Analysis of ambient concentrations (NAAQS and CAAQS). The Commenter claims that the IS/MND air quality analysis did not evaluate ambient air quality impacts because it only compared emissions to significance thresholds.

Response: The IS/MND air quality analysis followed guidance provided in the BAAQMD CEQA Air Quality Guidelines. With the exception of carbon monoxide, these guidelines do not recommend dispersion modeling to address impacts to ambient air quality standards. In developing their thresholds of significance, BAAQMD recognizes that (page 2-1)…

> *"…By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If*

a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant."

For this reason, emission-based thresholds are used to judge a project's impact with respect to ambient air quality standards. For fugitive emissions of particulate matter from construction, the application of BAAQMD-recommended best management practices is used to judge the significance.

2. Page 19: Construction emissions averaging - 336 work days divided by 365 calendar days to arrive at average? The commenter claims that construction is expected to last for 336 days, not 365 days. Thus, average daily emissions are underestimated as annual emissions should have been converted to daily by dividing by 336 days.

Response: CalEEMod predicted annual emissions in tons and those values were divided by the number of workdays, which was reported as 336 days, and converted to average daily pounds emission in pounds per day. Table 2-1 (page 2-2) of the BAAQMD CEQA Air Quality Guidelines provide the recommended thresholds, which are "Average Daily Emissions (lb/day)" for construction-related impacts. Operational impacts are based on "Average Daily Emissions (lb/day)" and "Maximum Annual Emission (tpy)."

3. Page 19: Construction emissions - annual vs summer output from CalEEMod. The commenter claims that most of the construction would occur in summer and therefore, use of annual emissions underestimates ROG emissions for both construction and operation.

Response: As previously stated, BAAQMD CEQA Air Quality Guidelines provide the recommended thresholds, which are "Average Daily Emissions (lb/day)" for construction-related impacts. Operational impacts are based on "Average Daily Emissions (lb/day)" and "Maximum Annual Emission (tpy)." The commenter is suggesting that maximum summer day emissions be used to judge the significance of the impacts.

4. Page 20: Table 2 paragraphs below – equipment usage discrepancies between CalEEMod and applicant provided spreadsheet (equipment hours per day, etc.). The commenter claims that the wrong number of hours per day that equipment would operate were used in the CalEEMod modeling.

Response: The CalEEMod modeling used average hours per day during each construction phase. Within a construction phase, the applicant provided the number of days during that phase equipment would be used and the hours per day when it is used. Average hours per day were computed by computing the total number of hours in a construction phase and dividing it by the number of days in that phase. The average hours per phase are typically less than the average hours per day provided because the equipment would not be used every day of that particular construction phase.

MITIGATION MONITORING OR REPORTING PROGRAM

Aligned Data Center Project

File Nos. PLN2017-12535

CITY OF SANTA CLARA

July 2017

P R E F A C E

Section 21081 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring or Reporting Program whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring or reporting program is to ensure compliance with the mitigation measures during project implementation.

The Initial Study concluded that the implementation of the Aligned Data Center Project could result in significant effects on the environment and mitigation measures were incorporated into the proposed project or are required as a condition of project approval. This Mitigation Monitoring or Reporting Program addresses those measures in terms of how and when they will be implemented.

This document does *not* discuss those subjects for which the Initial Study concluded that the impacts from implementation of the project would be less than significant.

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
AIR QUALITY				
Impact AIR-1: The project would result in significant emissions of NO_x during construction. **Impact AIR-3:** Project construction would result in cancer risks and $PM_{2.5}$ concentrations in excess of BAAQMD thresholds.	MM AIR-1: The project shall develop a plan demonstrating that the off-road equipment (more than 25 horsepower) to be used in the construction of the project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide flee-average 28 percent NO_x reduction and 70 percent PM reduction compared to the CalEEMod modeled average used in the air quality report prepared for the project. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. The following are feasible methods: • All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet US EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 2 verifiable diesel emission control devices that altogether achieve an 85 percent reduction in particulate matter exhaust; alternatively (or in combination) • Use of diesel construction equipment that meets US EPA Tier 4 interim emission standards. Additionally, the project shall provide electric line power to the site during the early phases of construction to minimize the use of diesel powered stationary equipment, such as generators.	During all phases of construction	Project Applicant	Director of Community Development

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
Impact AIR-2: Operation of the proposed project could result in significant NOx emissions.	MM AIR-2: Generator operation for maintenance and testing purposes shall be limited so that the combined operation of all engines does not exceed 100 hours per day in total.	During project operation	Project Applicant	Director of Community Development
BIOLOGICAL RESOURCES				
Impact BIO-1: Construction activities associated with the proposed project could result in the loss of fertile eggs, nesting raptors or other migratory birds, or nest abandonment.	MM BIO 1-1: The following mitigation and avoidance measures will avoid possible impacts to migratory birds during construction: • If removal of the trees on-site would take place between January and September, a pre-construction survey for nesting raptors will be conducted by a qualified ornithologist to identify active nesting raptor nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys will be conducted no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys will be conducted no more than thirty (30) days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, the ornithologist shall, in consultation with the State of California, Department of Fish & Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet) around the nest until the end of the nesting activity.	Prior to tree removal, site clearing or construction activity, and during all phases of construction (if a buffer is established).	Project Applicant	Director of Community Development California Department of Fish and Wildlife See previous

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
	• The applicant shall submit a report indicating the result of the survey and any designated buffer zones to the satisfaction of the Director of Planning and Inspection prior to the issuance of a tree removal permit by the City Arborist.	See previous page	See previous page	page
Impact BIO-2: Project construction may result in unintended damage and/or injury to trees to be retained on-site.	MM BIO-2.1: Barricades – Prior to initiation of construction activity, temporary barricades would be installed around all trees in the construction area. Six-foot high, chain link fences would be mounted on steel posts, driven two feet into the ground, at no more than 10-foot spacing. The fences shall enclose the entire area under the drip line of the trees or as close to the drip line area as practical. These barricades will be placed around individual trees and/or groups of trees.	Prior to initiation of construction activity	Project Applicant	Director of Community Development
	MM BIO-2.2: Root Pruning (if necessary) – During and upon completion of any trenching/grading operation within a tree's drip line, should any roots greater than one inch in diameter be damaged, broken or severed, root pruning to include flush cutting and sealing of exposed roots should be accomplished under the supervision of a qualified Arborist to minimize root deterioration beyond the soil line within 24 hours.	During and upon completion of trenching/grading on-site	Project Applicant	Director of Community Development
	MM BIO-2.3: Pruning – Pruning of the canopies to include removal of deadwood should be initiated prior to construction operations. Such pruning will provide any necessary construction clearance, will lessen the likelihood or potential for limb breakage, reduce 'windsail' effect and provide an environment suitable for healthy and vigorous growth.	Prior to initiation of construction activities	Project Applicant	Director of Community Development

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
	MM BIO-2.4: Fertilization –Fertilization by means of deep root soil injection should be used for trees to be impacted during construction in the spring and summer months. MM BIO-2.5: Mulch – Mulching with wood chips (maximum depth of three inches) within tree environments should be used to lessen moisture evaporation from soil, protect and encourage adventitious roots and minimize possible soil compaction.	During all phases of construction During landscape installation	Project Applicant Project Applicant	Director of Community Development Director of Community Development
CULTURAL RESOURCES				
Impact CUL–1: Subsurface cultural resources could be uncovered during construction of the proposed project.	MM CUL-1.1: After demolition of the existing building and paved parking lot on the site, a qualified archaeologist shall complete mechanical presence/absence testing for archaeological deposits and cultural materials. In the event any prehistoric site indicators are discovered, additional backhoe testing will be conducted to map the aerial extent and depth below the surface of the deposits. In the event prehistoric or historic archaeological deposits are found during presence/absence testing, the significance of the find will be determined. If deemed significant, a Treatment Plan will be prepared and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following: • Identify scope of work and range of subsurface effects (include location map and development plan), • Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found), • Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant	After building demolition and prior to project construction	Project Applicant	Director of Community Development See previous

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
	information), • Detail field strategy used to record, recover, or avoid the finds (photogs, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals. • Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.), • Report structure, including a technical and layman's report and an outline of document contents in one year of completion of development (provide a draft for review before a final report), • Disposition of the artifacts, • Appendices: site records, update site records, correspondence, consultation with Native Americans, etc. <u>MM CUL-1.2:</u> In the event that prehistoric or historic resources are not discovered during presence/absence testing are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the Director of Community Development will be notified, and the archaeologist will examine the find and make appropriate recommendations prior to issuance of building permits. If the find is deemed significant, a Treatment Plan will be prepared as outlined in MM CUL-1.1	See previous page During all phases of construction	See previous page Project Applicant	page Director of Community Development

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
	MM CUL-1.3: In the event that human remains are discovered during presence/absence testing or excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.	During all phases of construction	Project Applicant	Santa Clara County Coroner Native American Heritage Commission
HAZARDS AND HAZARDOUS MATERIALS				
Impact HAZ-1: Construction of the proposed project could result in construction worker exposure to contaminated soil and or groundwater.	MM HAZ – 1.1: Prior to the issuance of grading permits, shallow soil samples shall be taken in areas where soil disturbance is anticipated to determine if contaminated soils with concentrations above established construction/trench worker thresholds may be present due to historical agricultural use and from historical leaks and spills. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division prior to initiation of work. Once the soil sampling analysis is complete, a report of the findings will be provided to the Director of Community Development and other applicable City staff for review.	Prior to issuance of grading permits	Project Applicant	Santa Clara Fire Department, Division of Hazardous Materials

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
	MM HAZ – 1.2: Documentation of the results of the soil sampling shall be submitted to and reviewed by the City of Santa Clara prior to the issuance of a grading permit. Any soil with concentrations above applicable ESLs or hazardous waste limits would be characterized, removed, and disposed of off-site at an appropriate landfill according to all state and federal requirements.	Prior to issuance of grading permits	Project Applicant	Director of Community Development
	MM HAZ – 1.3: A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include: a detailed discussion of the site background; a summary of the analytical results from MM HM-1.1; preparation of a Health and Safety Plan by an industrial hygienist; protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected; worker training requirements, health and safety measures and soil handing procedures shall be described; protocols shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be implemented; notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction; notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction; on-site soil reuse guidelines; sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; soil stockpiling protocols; and protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, the City's Director of Community Development, and/or the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division.	Prior to issuance of grading permits	Project Applicant	Santa Clara County Environmental Health Department City of Santa Clara Director of Community Development Santa Clara Fire Department, Division of Fire Prevention and Hazardous Materials

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
	MM HAZ – 1.4: If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures will be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either (1) managed or treated in place, if deemed appropriate by the oversight agency or (2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations and applicable local, state, and federal laws.	Prior to issuance of grading permits	Project Applicant	Community Development Director
	MM HAZ – 1.5: Sanitary Sewer Sampling and Analysis Plan: Prior to removing or decommissioning the sanitary sewer line on-site, a Sampling and Analysis Plan shall be prepared presenting the protocols for line removal and confirmation sampling. These plans shall be submitted to the Community Development Director for review and approval prior to construction.	Prior to removing or decommissioning the sanitary sewer line on-site	Project Applicant	Community Development Director

MITIGATION MONITORING OR REPORTING PROGRAM ALIGNED DATA CENTER PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Responsibility for Implementation**	**Oversight of Implementation**
NOISE AND VIBRATION				
Impact NOI-1: Project operation could exceed requirements established in the City Code for noise levels at adjacent properties during generator testing.	MM NOI-1: Emergency Generator Testing. No more than nine powerblocks (45 generators) located on the western boundary of the generator yard may be tested simultaneously. MM NOI-2: Noise attenuation measures will be subject to demonstration of effectiveness in meeting the City's noise standards, to the satisfaction of the City's Planning Division, prior to approval of building permits.	During all project operations During all project operations	Project Applicant Same as previous	Director of Community Development Same as previous

SOURCE: City of Santa Clara, *Aligned Data Center Project Initial Study***,** June 2017.

PROJECT RAPTOR

2305 MISSION COLLEGE BOULEVARD SANTA CLARA, CALIFORNIA 95054

PROJECT TEAM

CLIENT	GENERAL CONTRACTOR	ARCHITECT	STRUCTURAL ENGINEER	MECHANICAL ENGINEER	ELECTRICAL ENGINEER	CIVIL ENGINEER	LANDSCAPE ARCHITECT	GEOTECH ENGINEER
ALIGNED DATA CENTERS LLC 60 Backus Avenue Danbury, CT 06810	SKANSKA USA BUILDING INC 1999 HARRISON ST #1950 OAKLAND, CA 94612 TEL: 510-285-1804 BEN FINNEY	CAC ARCHITECTS 400 BRANNAN STREET, SUITE NO. 1 SAN FRANCISCO, CA. 94107 TEL: 415-402-0000 TED MAHL	PEOPLES ASSOCIATES STRUCTURAL ENGINEERS 1999 TARGS ST MILPITAS, CA. 95035 TEL: 408-957-9220 MATT KNUTSEN	SOUTHLAND INDUSTRIES MECHANICAL ENGINEERS 33225 WESTERN AVENUE UNION CITY, CA 94587 TEL: 510 477 3300 TONY SHANOURI	ALFATECH 1321 RIDDER PARK DR #50 SAN JOSE, CA 95131 TEL: 408 467 1200 MARK FISHER	KIER & WRIGHT 3350 SCOTT BLVD #22 SANTA CLARA, CA 95054 TEL: 408-727-9555 NEKTARIOS MATHEOS	TANIGUCHI LANDSCAPE ARCITECTURE 1013 SOUTH CLAREMONT SAN MATEO, CA. 94402 TEL: 650-638-9985 DENNIS TANIGUCHI	CORNERSTONE EARTH GROUP GEOTECHNICAL 1279 SPRINGBROOK ROAD STE. 101 WALNUT CREEK, CA TEL: 925 988 9600 MATTHEW SHAFFER

PROJECT DATA

SCOPE OF WORK

New 2 level, 495,610 SF data center on a 15.7 acre site bordered by Mission College Boulevard, San Tomas Creek, Agnew Road and existing commercial buildings. The site development includes a generator yard, equipment yard, underground water storage and parking for 71 cars. Part of the site will be used for a Silicon Valley Power substation that will be dedicated to this project.

The building plan includes two data room floors, an equipment mezzanine level serving Level 1, infrastructure for a future second equipment mezzanine supporting Level 2, an equipment platform above the building roof and ancillary office space, loading docks and storage areas.

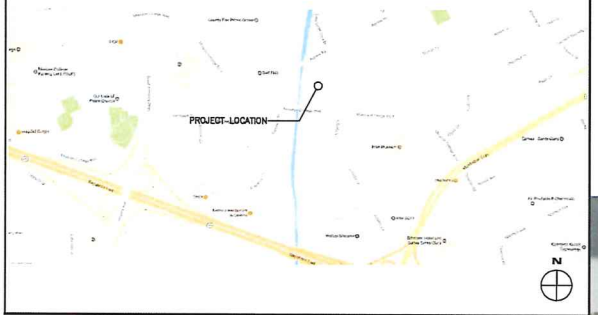
ZONING DISTRICT ML (LIGHT INDUSTRIAL)

HEIGHT LIMIT 70'

TYPE OF CONSTRUCTION:	IIB
NUMBER OF STORIES	2
HEIGHT (TOP OF ROOF)	58'-1" +/-
LEVEL 1	201,489 SF
LEVEL 1 MEZZANINE	46,329 SF
LEVEL 2	202,870 SF
LEVEL 2 MEZZANINE	44,922 SF
TOTAL	495,610 +/-
TOTAL SITE AREA	15.7 ACRES (684,990 +/- SF)
FAR	.72

DRAWING INDEX

VICINITY MAP



OVERALL AREA RENDERING

MAIN ENTRANCE RENDERING

CAC ARCHITECTS
400 BRANNAN STREET, SUITE 1
SAN FRANCISCO, CA 94107
T: 415.402.0000
F: 415.817.1739
www.cacarch.com

PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED

ALIGNED DATA CENTERS

PROJECT RAPTOR

2305 MISSION COLLEGE BLVD
SANTA CLARA, CA 95054

CAC PROJECT NO. 11222

REVISIONS

1 RESPONSE TO PCC COMMENTS 05/09/2017

KEY PLAN & NORTH ARROW

DATE 2017-02-06

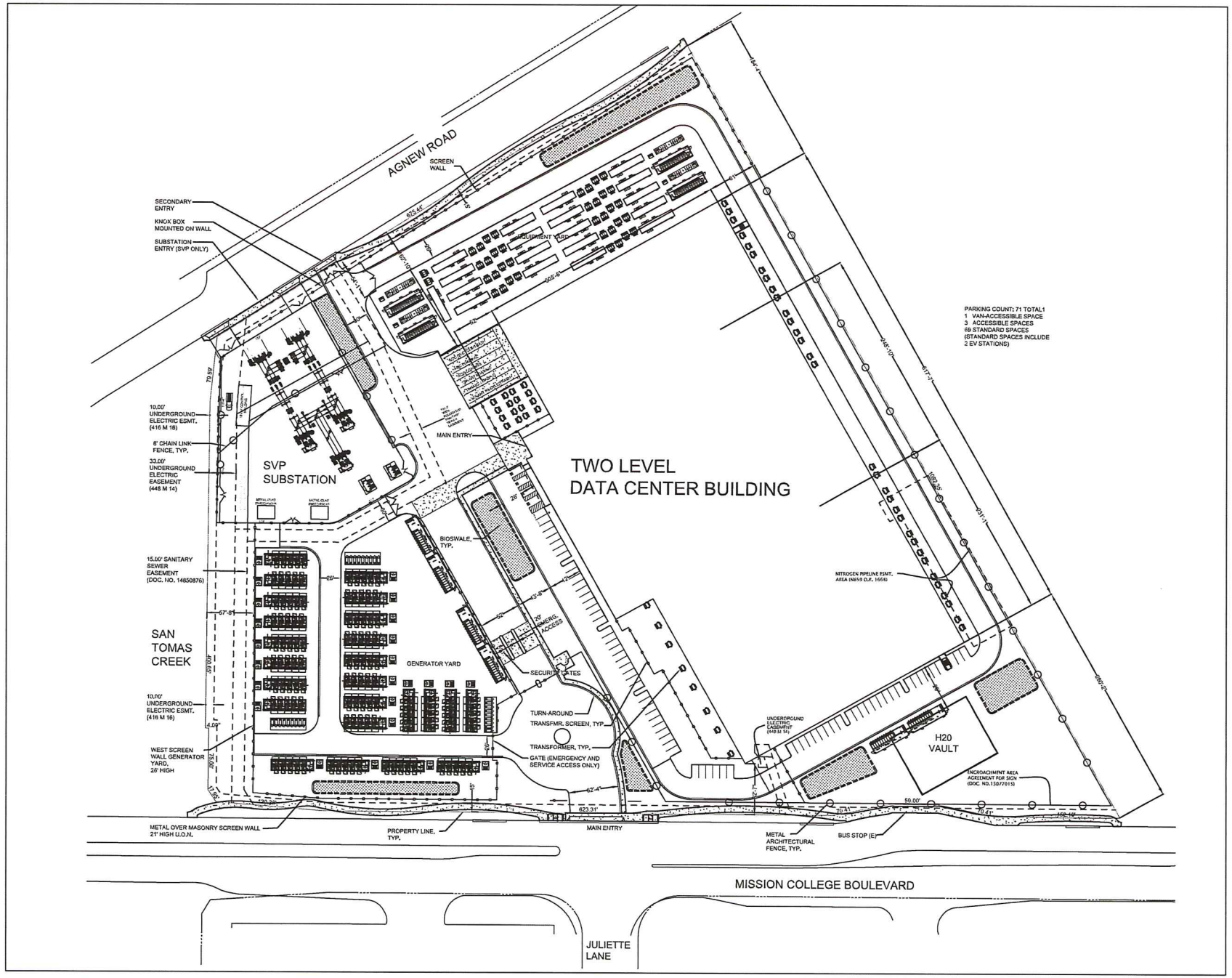
SCALE

DRAWING TITLE

COVER SHEET AND PROJECT DATA

SHEET NO.

A0.0



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PROJECT TEAM

AGENCY APPROVAL

PROJECT

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SANTA CLARA, CA 95054

CAC PROJECT NO. 11222

REVISIONS
1 RESPONSE TO PCC COMMENTS 05/09/2017

KEY PLAN & NORTH ARROW

DATE 2017-05-09

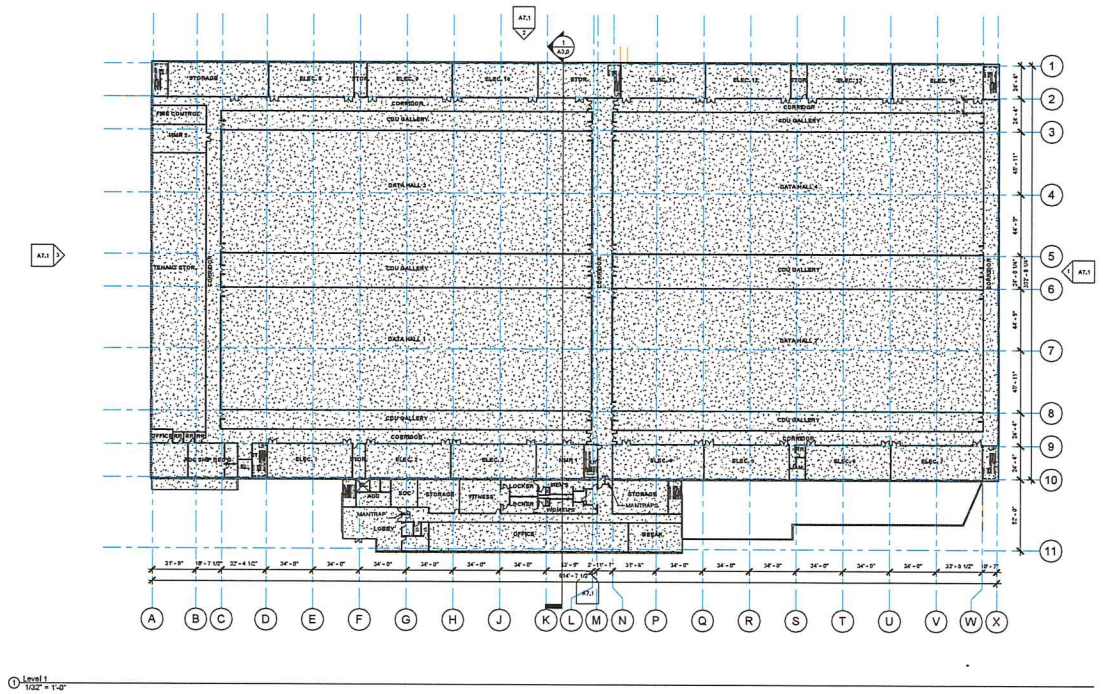
SCALE

DRAWING TITLE

ARCHITECTURAL SITE PLAN

SHEET NO.

A0.1



1 Level 1
1/32" = 1'-0"

CAC ARCHITECTS
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

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SANTA CLARA, CA, 95054

CAC PROJECT NO.	11222

REVISIONS

1	RESPONSE TO PCC COMMENTS	04/05/17

KEY PLAN & NORTH ARROW

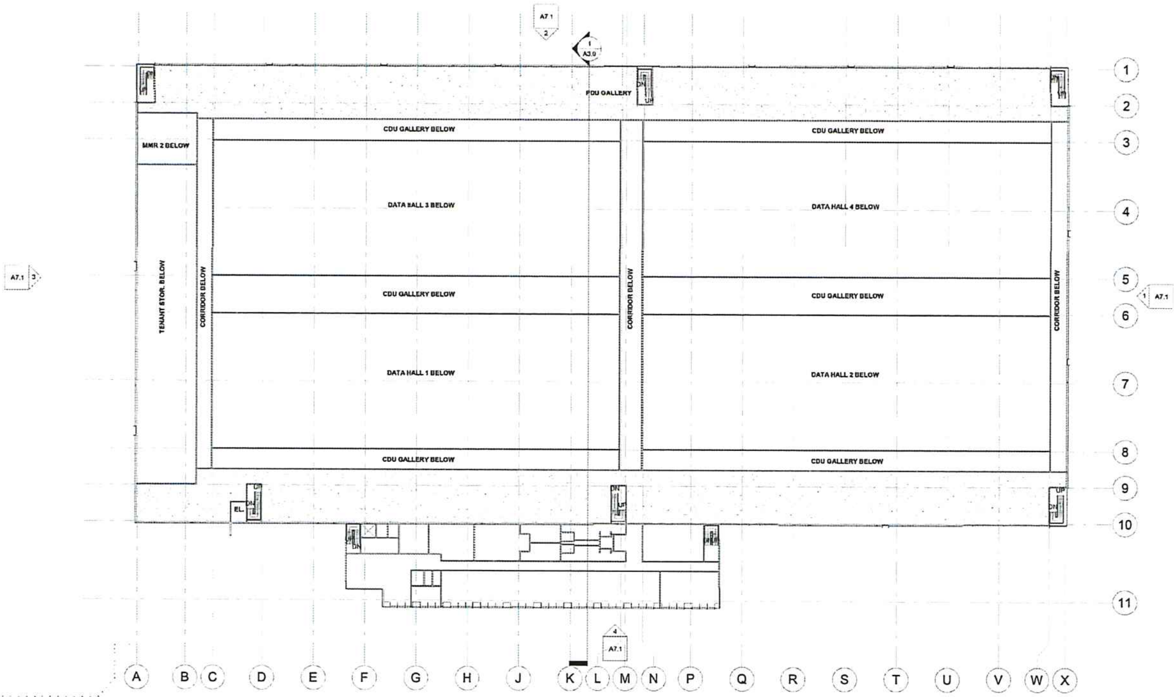
DATE	02-21-2017
SCALE	1/32" = 1'-0"

DRAWING TITLE

LEVEL 1 PLAN

SHEET NO.

A1.1



1 Mezzanine 1
1/32" = 1'-0"

CAC ARCHITECTS
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED

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PROJECT RAPTOR

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SANTA CLARA, CA. 95054

CAC PROJECT NO. 11222

REVISIONS

1 RESPONSE TO PCC COMMENTS 05/09/17

KEY PLAN & NORTH ARROW

DATE 02-21-2017

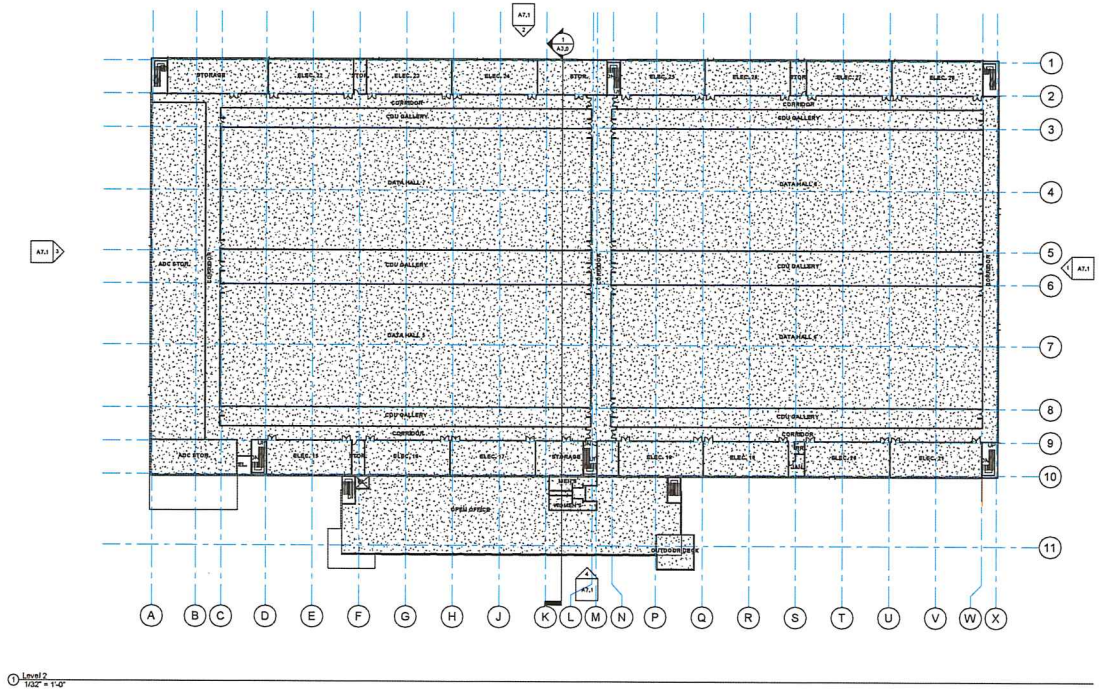
SCALE 1/32" = 1'-0"

DRAWING TITLE

LEVEL 1 MEZZANINE PLAN

SHEET NO.

A1.2



1 Level 2
1/32" = 1'-0"

CAC ARCHITECTS
400 BRANNAN STREET, SUITE 1
SAN FRANCISCO, CA 94107
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

PROJECT RAPTOR

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CAC PROJECT NO.	11222

REVISIONS

1	RESPONSE TO PCC COMMENTS	01/09/17

KEY PLAN & NORTH ARROW

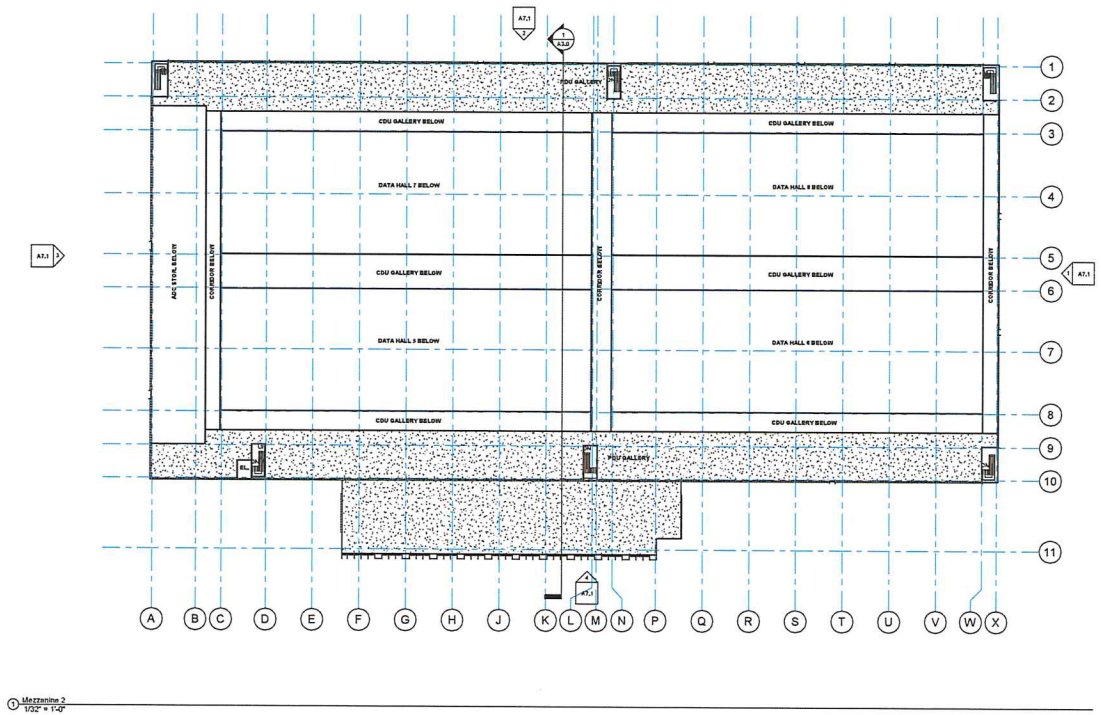
DATE	02-21-2017
SCALE	1/32" = 1'-0"

DRAWING TITLE

LEVEL 2 PLAN

SHEET NO.

A2.1



1 Mezzanine 2
1/32" = 1'-0"

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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

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CAC PROJECT NO.	11222

REVISIONS

1	RESPONSE TO PCC COMMENTS	05/05/17

KEY PLAN & NORTH ARROW

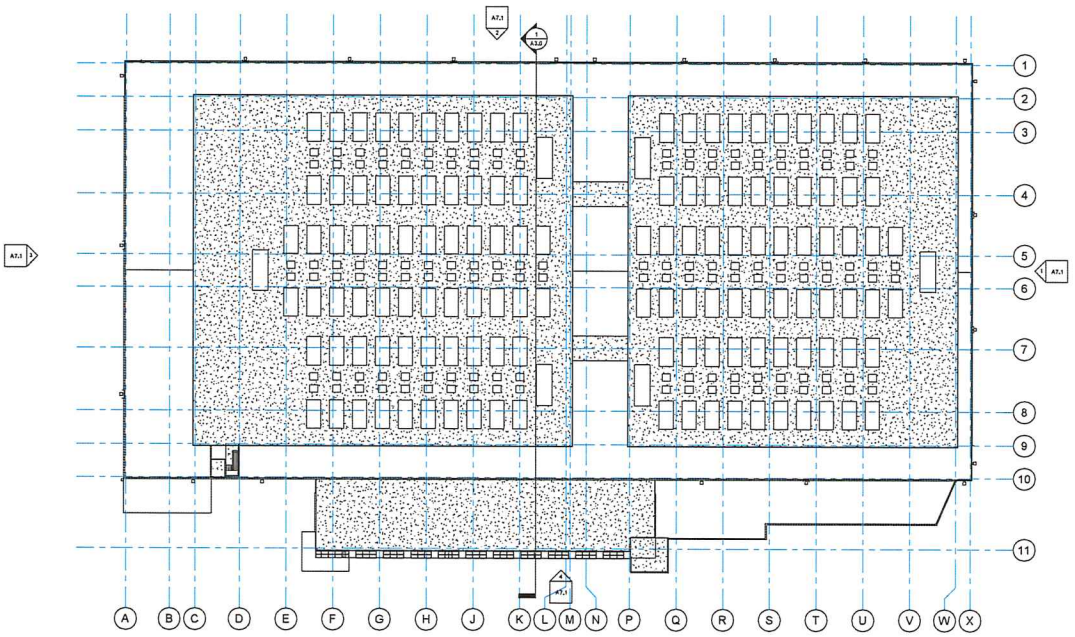
DATE	02-21-2017
SCALE	1/32" = 1'-0"

DRAWING TITLE

LEVEL 2 MEZZANINE PLAN

SHEET NO.

A2.2



1 Mech. Pad
1/32" = 1'-0"

CAC ARCHITECTS
450 BRANNAN STREET, SUITE 1
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

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CAC PROJECT NO.	11222

REVISIONS

1	RESPONSE TO PCC COMMENTS	04/05/17

KEY PLAN & NORTH ARROW

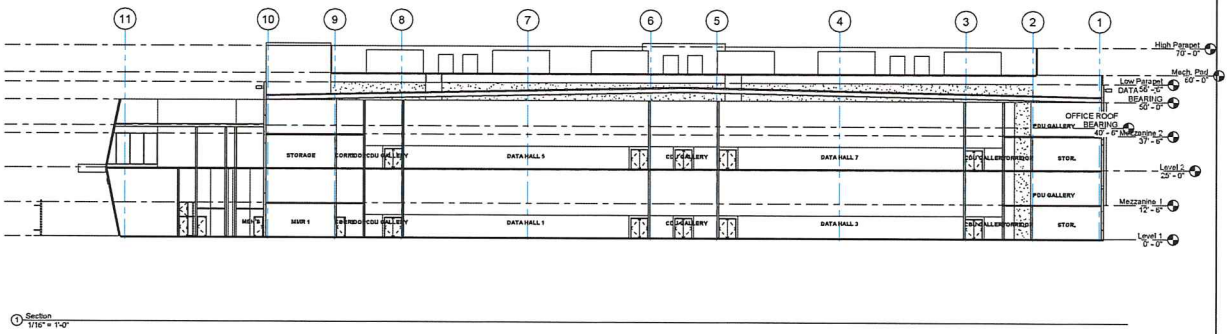
DATE	02-21-2017
SCALE	1/32" = 1'-0"

DRAWING TITLE

EQUIPMENT PLATFORM PLAN

SHEET NO.

A2.3



1 Section
1/16" = 1'-0"

CAC ARCHITECTS
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

PROJECT RAPTOR

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SANTA CLARA, CA. 95054

CAC PROJECT NO.	11222

REVISIONS

1	RESPONSE TO PCC COMMENTS	05/09/17

KEY PLAN & NORTH ARROW

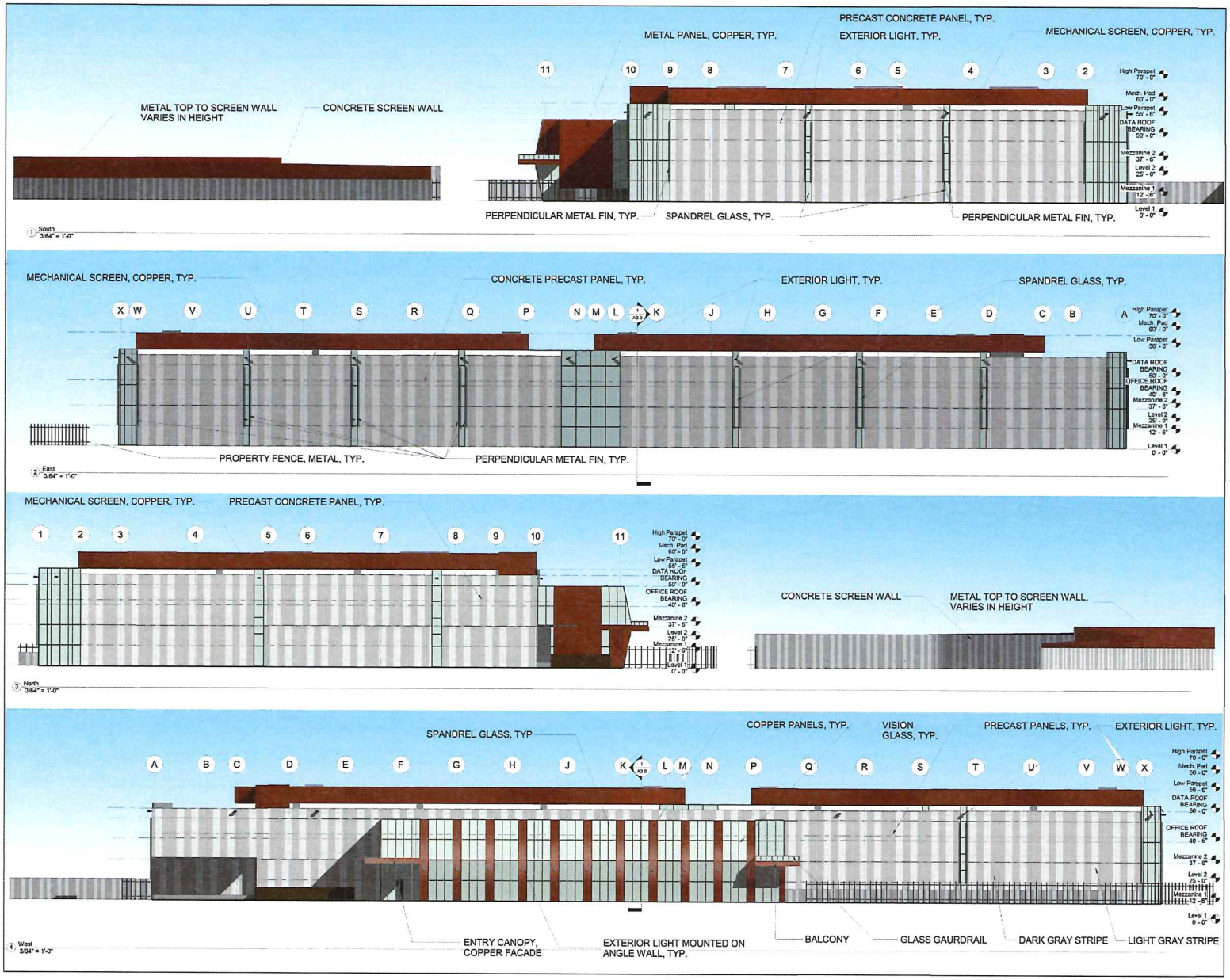
DATE	02-21-2017
SCALE	1/16" = 1'-0"

DRAWING TITLE

BUILDING SECTION

SHEET NO.

A3.0



CAC ARCHITECTS
400 BRANNAN STREET, SUITE 1
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

PROJECT RAPTOR

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CAC PROJECT NO. 11222

REVISIONS

1 RESPONSE TO PCC COMMENTS 05/01/17

KEY PLAN & NORTH ARROW

DATE 02-21-2017

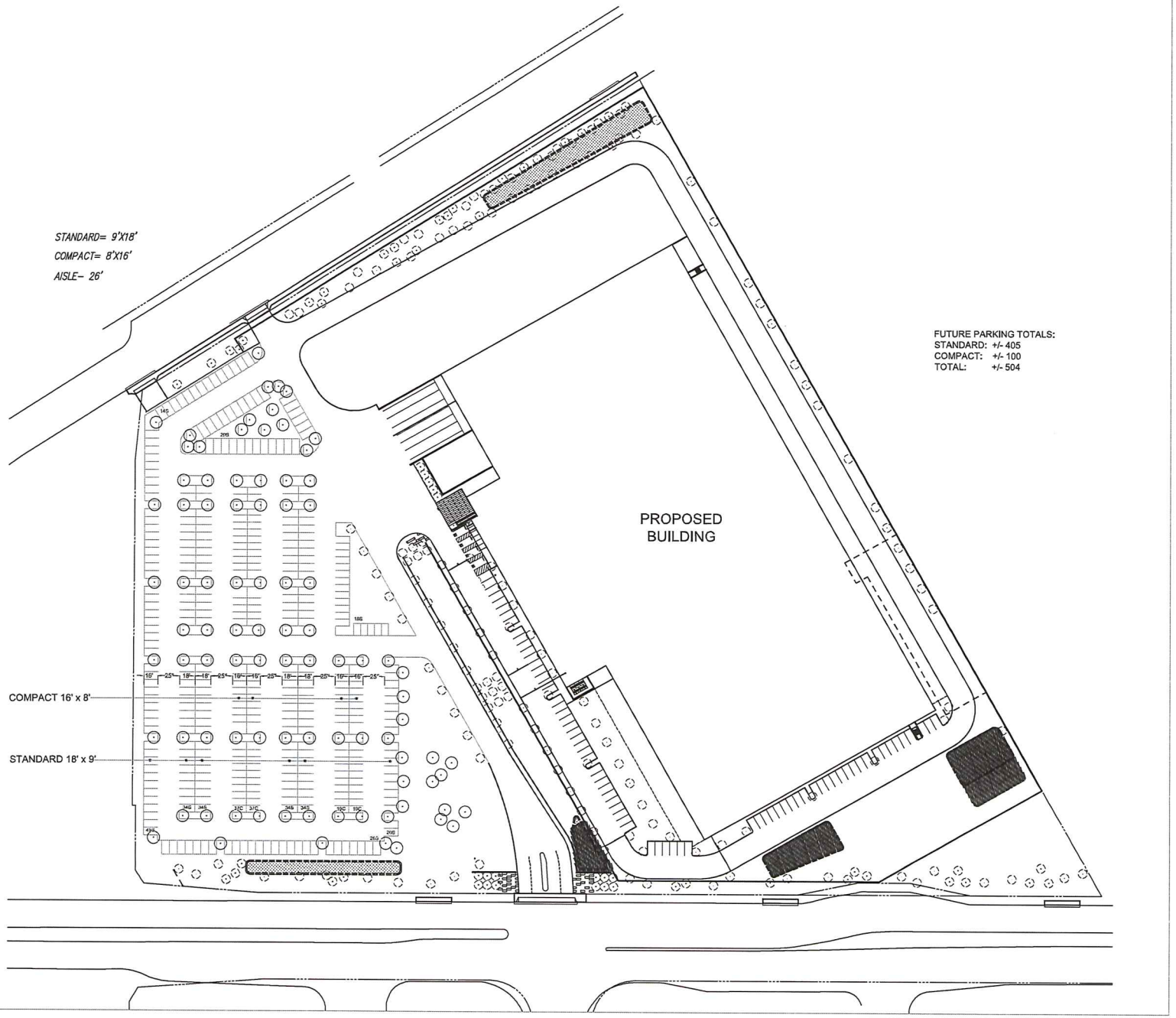
SCALE 3/64" = 1'-0"

DRAWING TITLE

ELEVATIONS

SHEET NO.

A7.1



CAC ARCHITECTS
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PROJECT TEAM

AGENCY APPROVAL

PROJECT

ALIGNED DATA CENTERS

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SANTA CLARA, CA 95054

CAC PROJECT NO. 11222

REVISIONS
1 RESPONSE TO PCC COMMENTS 05/09/2017

KEY PLAN & NORTH ARROW

DATE 2017-05-09

SCALE

DRAWING TITLE

ALTERNATE PARKING PLAN

SHEET NO.

A8.0