
INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

1150 Walsh Avenue SV1 Data Center



Prepared for:

**City of Santa Clara
Community Development Department
1500 Warburton Avenue
Santa Clara, CA 95050**

March 2019

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**SV1 DATA CENTER
1150 Walsh Avenue**

**INITIAL STUDY
WITH PROPOSED
MITIGATED NEGATIVE DECLARATION (MND)**

Prepared For:

**City of Santa Clara
Community Development Department
1500 Warburton Avenue
Santa Clara, CA 95050**

Prepared By:

**Circlepoint
46 S First Street
San Jose, CA 95113**

March 2019

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INITIAL STUDY AND ENVIRONMENTAL CHECKLIST FORM

1. Project title	SV1 Data Center
2. Lead agency name and address	City of Santa Clara, 1500 Warburton Avenue Santa Clara, CA 95050
3. Contact person and phone number	Debby Fernandez, (408) 615-2457
4. Project location	1150 Walsh Avenue, Santa Clara, CA 95050
5. Project sponsor's name and address	RagingWire Data Centers, Inc. PO Box 348060 Sacramento, CA 95834
6. General plan designation	Heavy Industrial
7. Zoning	Heavy Industrial (MH)
9. Description of project	As part of the project, the existing structures and associated parking lot would be removed and replaced with a new, five-story, approximately 160,450 square foot data center. New generators would provide back-up power to the data center and average power consumption would be 27 megawatts (MW). The project would be constructed over a period of 25 months.
10. Surrounding land uses and setting	The 3.32-acre project site is zoned heavy industrial (MH) and is currently undeveloped. The project site is in Santa Clara north of Highway US-101 and west of the Norman Y. Mineta San Jose International Airport. The project site has frontage on Walsh Avenue. Surrounding land uses are predominantly industrial and there are no sensitive receptors within close proximity to the site
11. Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements)	None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “potentially significant impact” as indicated by the checklist on the following pages.

- | | |
|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Biological Resources |
| <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning |
| <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation and Traffic |
| <input checked="" type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION

On the basis of this Initial Study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Name, Title

Date

1 PROJECT DESCRIPTION

1.1 Project Location

The 3.32-acre project site is located in the City of Santa Clara (Santa Clara), in the Silicon Valley area of the larger San Francisco Bay Area region. The project site is within Santa Clara north of Highway US 101 and west of the Norman Y. Mineta San Jose International Airport (SJC). Land use designations surrounding the project site consist of light industrial, public/quasi-public, and low intensity office/research and development uses. The project site is zoned Heavy Industrial (MH).

Surrounding development consists of one- to two-story office and industrial buildings to the north, east, and west. Other nearby land uses include a U.S. Post Office, wholesale retailers, and a rental car agency. Buildings are generally set back from the street by landscaped areas, fencing, and surface parking. Street trees occur intermittently throughout the area, often breaking up views of existing buildings from the street. Sal's Airport and Limousine service occupies the lot immediately west of the project site while Sunlight Concepts (a solar lighting fixture dealership) and XL Vehicle Graphics and Digital Prints (a custom signage business) occupy the office building located immediately east of the project site. D&T Foods, a wholesale food distributor, is located to the south of the project site. A US Post Office is located north of the project site, across Walsh Avenue. **Figure 1** provides an overview map showing the location of adjacent uses.

1.2 Site Conditions

The project site is on the southern side of Walsh Avenue, in between Scott Boulevard and Lafayette Street, see **Figure 1** for project location. The project site is bound by a one-story office building to the east, a one-story office building to the west, and a large one-story warehouse to the south. The project site is bound by Walsh Avenue to the north. The project site is developed with three single-story light industrial buildings, asphalt, and surface parking areas. Currently vacant, the site's most recent use included an auto body shop with two associated corrugated metal warehouses in the three buildings on-site. Surface lots were recently used for outdoor storage of unused automobiles as well as car parts. The existing one-story building that fronts on Walsh Avenue is set back from the roadway by a landscaped area featuring a small lawn, shrubbery, and a paved pedestrian walkway.

The project site contains 8 existing trees: one Evergreen magnolia, 2 palm trees, 1 carob tree, and 4 California walnut trees. Vehicular access to the site is from Walsh Avenue via a single two-way driveway located between the office building and the surface lot. The site includes utility connections to municipal facilities (water, sewer, and electrical).



Legend

Project Site



Not to Scale

Project Location Map

1.3 Project Components

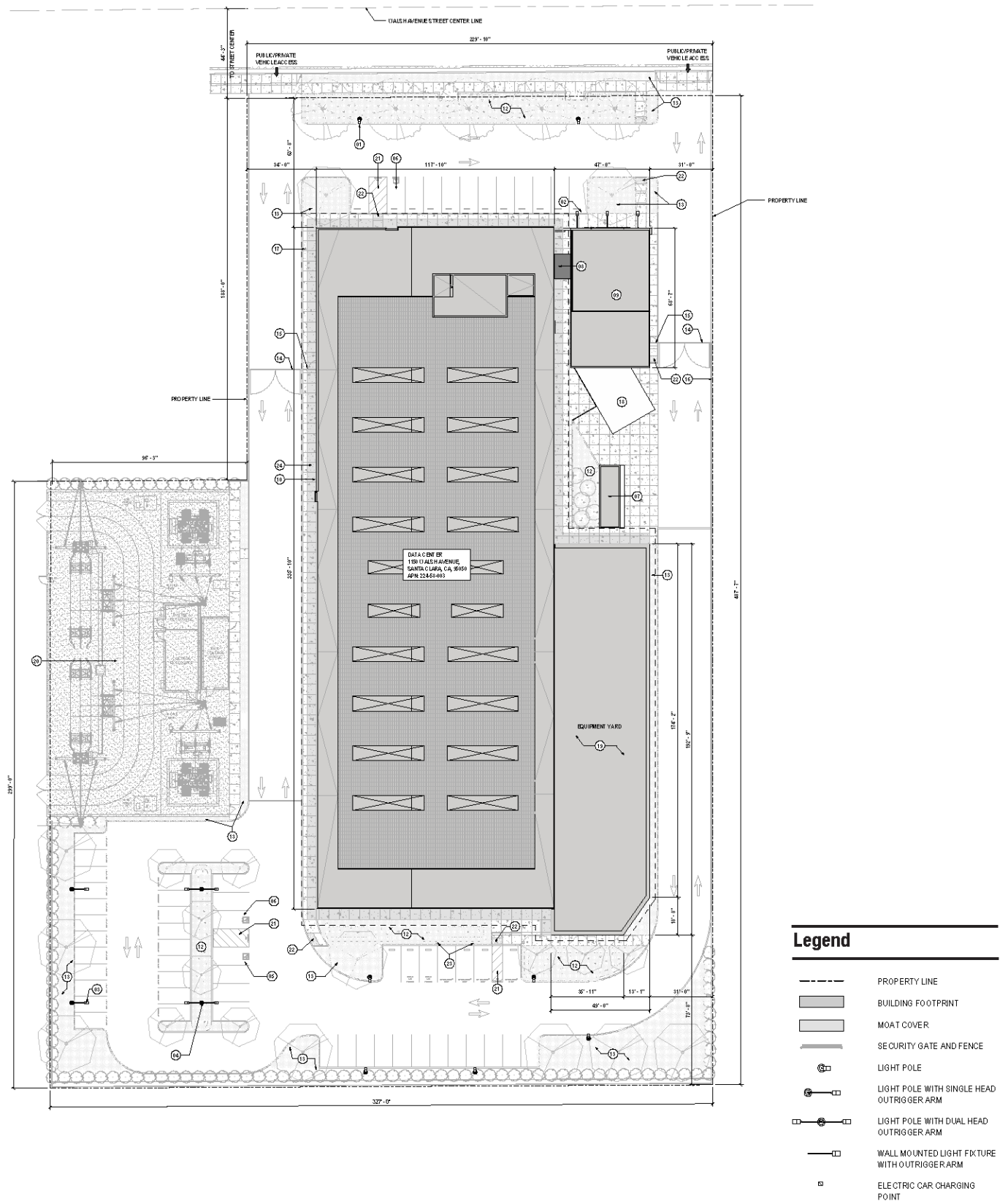
As part of the project, the three existing buildings would be demolished, and the associated asphalt and parking areas would be removed. A four-story, 160,450 square-foot data center would replace the existing uses on the site. The data center would be approximately 67 feet in height and would house computer servers and supporting equipment for private clients. Clients would either use the project as a place to relocate their existing servers or as a place to store new servers and expand their server capacity. The data center would have 27 megawatt (MW) connections to SVP service, and 11 backup diesel generators provide power to the data center in the event of an emergency. Backup generators would be placed outdoors on the eastern side of the data center. Rooftop mechanical equipment would be required to provide interior temperature control and to cool computer servers.

As shown in **Figure 2**, a new electrical substation would be constructed on the western portion of the project site. The substation would exclusively serve the project. The 27 MW service provided by the substation would allow for daily fluctuations of power supply, which would range from 16 MW to approximately 25 MW. The data center would use a daily average of approximately 22 MW. The developer and Silicon Valley Power (SVP) would both own equipment in the substation and would each be responsible for the service and maintenance of their respective equipment. A combination of fencing and block wall would be constructed around the substation for security purposes.

Site improvements would include the data center building, substation, backup generators and associated above ground fuel storage tanks, and a covered loading dock. Ancillary improvements would include a new driveway and sidewalk, parking, perimeter fencing, and site utilities (see **Figure 2**). A new water line to the project site from Walsh Avenue would be required. In addition to on-site improvements, some off-site trenching would be required to connect the substation to SVP power. Initial trenching would connect the data center to SVP service in the street, and future trenching would be required to connect the new substation to SVP service. All trenching is anticipated to occur in existing public right-of-way or utility easements, and/or in areas that have been previously disturbed for urban development. After trenching and utility connections are completed, trenched areas would be restored to their original condition, which is generally anticipated to be paved surfaces.

Building Design

The data center would be steel frame construction and would feature a multi-textured exterior with ribbed, perforated, and flat metal panels. The ground floor would feature a curtain wall around the northwest corner of the building with large glass windows. A cast-in-place concrete wall would extend around the northeast corner of the building and would include a stylized building address and RagingWire logo. Rooftop equipment would include economizing chillers with associated electric pumps. Such equipment would be hidden from view behind a screen wall constructed from opaque glass. Backup diesel generators and associated fuel storage tanks for the data center would be located behind landscaping and an acoustic wall. The generator yard would not be visible from the public right-of-way. Renderings of the data center are shown in **Figure 3**.



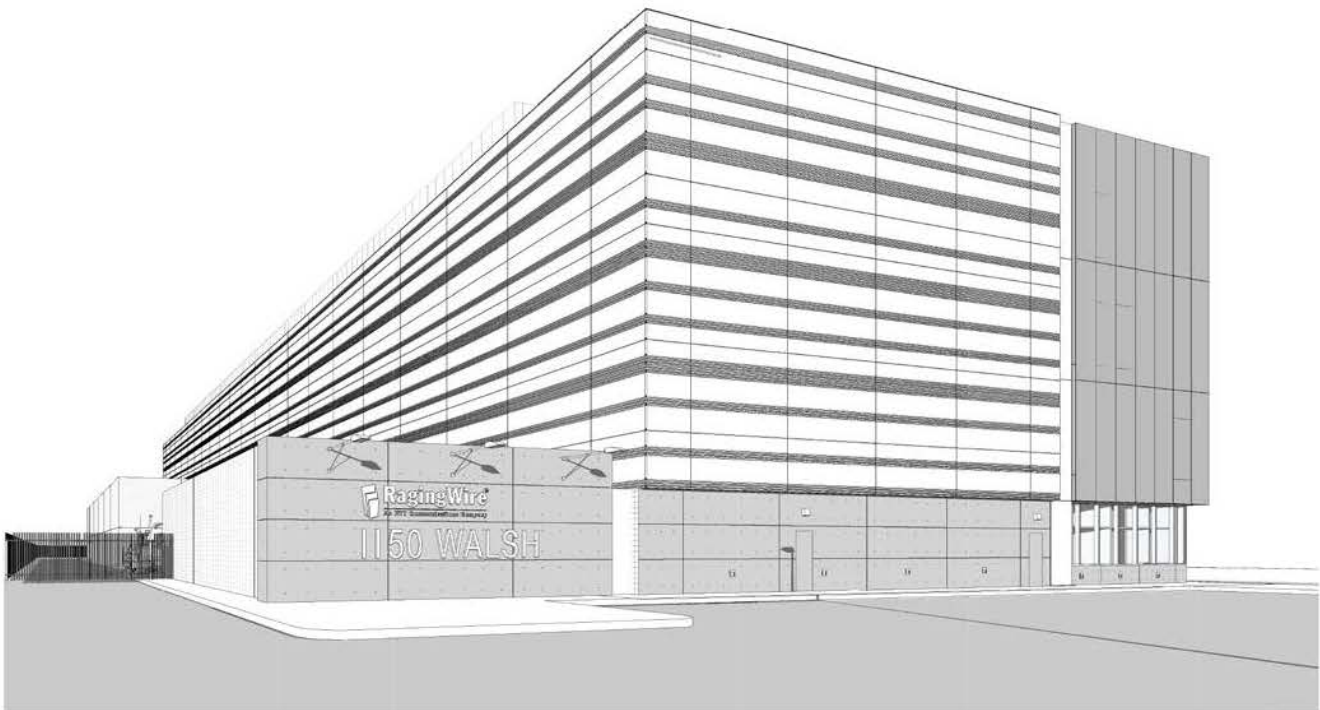
Project Site Map

Figure

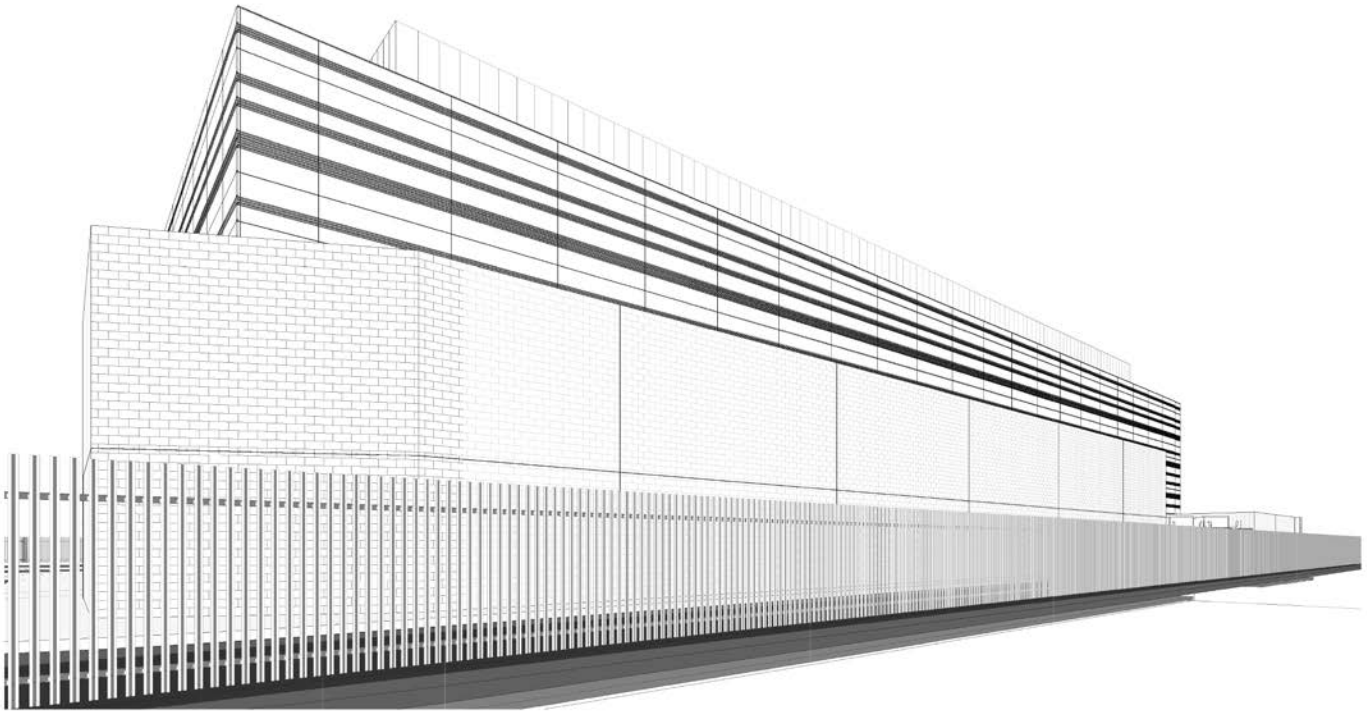
Source: RagingWire, 2018



PERSPECTIVE - FROM NORTHWEST



PERSPECTIVE - FROM NORTHEAST



PERSPECTIVE - FROM SOUTHEAST



PERSPECTIVE - FROM SOUTHWEST

Major Equipment

Table 1-1 provides a list of the major equipment that would be located on site as part of the project.

Table 1-1 Major Equipment

Equipment	Quantity	Location
3,250 kilowatt (KW) standby generators	10	Exterior generator yard with acoustic wall at perimeter
1,000 KW standby generator	1	Exterior generator yard with acoustic wall at perimeter
Chillers	18	Data center rooftop

Source: RagingWire, 2018

Parking and Site Access

The project site contains approximately 25 designated parking spaces. All existing parking would be removed to construct the data center. The project would be required to provide 40 parking spaces per Zoning Ordinance requirements for data centers. The project proposes to provide 40 parking spaces, of which 27 would be standard stalls, 7 would be compact stalls, 2 would be handicapped accessible spaces, and 4 would be clean air vehicle spaces. The project would also provide a minimum of 20 Class I bicycle locker spaces and 7 Class II bicycle rack spaces. Parking on-site would be divided between a row of stalls near the driveways on Walsh Avenue (11 stalls) and a larger lot on the southern end of the property (29 stalls).

Site access would remain from Walsh Avenue, provided by two curb cuts accessing a private driveway which would loop around the front parking area and also connect to a larger loop providing access all around the building. If needed, the design and dimensions of the driveways would be updated to meet Santa Clara's current design requirements as provided in the Santa Clara's Standard Details 2015 booklet. The driveway would also provide access for service vehicles and fire trucks.

The substation would be surrounded by fencing and would have separate access points for SVP and the data center. Access to the SVP side of the substation would be provided via the adjacent SVP property to the west of the data center. Access to the data center side would be provided from a driveway located on the west side of the data center building.

Landscaping and Trees

Construction of the data center and the associated parking lots would require removal of eight existing trees.

Landscaping is proposed along the sidewalk facing Walsh Avenue, in front of the north side of the building, on the north and south sides of the generator yard, and throughout the parking area located on the south side of the data center. As part of the project, 8 trees would be removed, and 18 new trees would be planted. New trees would include Columbia London Plane (*platanus acerifolia* Columbia), ginkgo (*ginkgo biloba*), and Oregon ash (*fraxinus latifolia*). Landscaping would also include shrubs such

as toyon (*heteromeles arbutifolia*) and tobira (*pittosporum tobira*), as well as grasses such as tufted hair grass (*deschampsia cespitosa*), Berkeley sedge (*carex divulsa*), and deer grass (*muhlenbergia rigens*). Landscaping throughout the project would be designed to serve as bioretention areas, a technique used to contain stormwater and filter contaminant and sedimentation from stormwater runoff.

1.4 Project Operation

Backup Energy Supply

A data center relies upon a constant supply of power to allow servers to operate continuously: 24 hours per day, 7 days per week. To ensure continuous energy supply, the project would utilize 11 backup diesel generators. This would include ten 3,250 KW generators and one 1,000 KW generator. The backup generators are designed to start up quickly in the event of a power failure. All generators would be located outdoors on the eastern side of the building surrounded by an acoustic screen wall. Generators would be placed in sound-attenuating enclosures.

Emissions from combustion engines for stationary uses, including diesel generators, are regulated by the US Environmental Protection Agency (EPA). Engine emission standards have been categorized into a tiering system that designates maximum pollutant emissions. All new generators would have EPA Tier II engines and would be outfitted with diesel particulate filters (DPFs). This analysis assumes generator engines would be fueled using ultra-low sulfur diesel fuel with a maximum sulfur content of 15 parts per million (ppm).

At project initiation, generators would be tested for functionality. An integrated systems test would be performed to ensure that the building's backup energy system would work correctly in the event of power failure. The test would require running at least five of the generators simultaneously under full load and may include running ten generators simultaneously with eight under full load and 2 under partial load. The integrated systems test would take place over one day.

The backup generators would have maintenance testing performed throughout the year to ensure performance when needed during a power failure. Maintenance testing for each generator would occur biweekly for 30 minutes under no load. Load testing for each generator would occur monthly for 30 minutes under load.

All generators would be operated strictly in accordance with permitted hours as determined by the Bay Area Air Quality Management District (BAAQMD).

The ten 3,250 KW generators would each have an associated 6,500-gallon diesel fuel tank and the 1,000 KW generator would have a 2000-gallon diesel fuel tank. Generators would sit on top of the fuel tanks and the fuel tanks would be at ground level. The planned driveway would allow convenient access to the fuel tanks when refueling is needed. Generators would include vertical exhaust stacks at heights ranging from approximately 13 to 31 feet.

Additionally, the project would include uninterruptable power supplies (UPS) and deep-cycle (DC) plant energy equipment (batteries) for additional backup power. Batteries would provide enough energy to cover the critical load of 16 MW in the event of a power failure. The quantity of batteries is dictated by

the length of time the back-up generators need to start and reach full operating power. This is typically less than 1 minute, however a safety factor is added which results in an average of 5 to 6 minutes of battery power available.

Batteries would be located in the electrical rooms within the building . Battery technology for commercial UPS systems is lithium type. These batteries do not release gas nor would they spill in the unlikely event a case becomes damaged. The batteries would be placed in cabinets and installed in separate battery rooms. The battery rooms would be temperature controlled for optimum efficiency and battery life.

Cooling

Computer servers convert electrical energy into heat as they operate but need to be kept cool. Therefore, cooling systems are a critical component of data center operation. Cooling systems would be installed to remove heat, ensuring servers operate safely and effectively.

The project would include air-cooled chillers on the rooftop connected to a closed-looped chilled water piping system. The piping system would be connected to computer room air handling (CRAH) units. The heat generated by server equipment would be absorbed through the CRAH units connected to chilled water coils, and the warmed water would then be circulated to the chillers on the roof. The chillers would release the heat into the atmosphere.

The air-cooled chillers on the roof would have an economization feature that uses the outside ambient air temperature to cool the system when the outdoor temperature is low enough. When the outdoor temperature is too warm for passive cooling, the cooling system would use electrical energy to cool the water inside the closed-loop system.

To support the cooling system, an estimated 173,752 gallons of water would be required annually. For the purposes of this analysis, it is assumed that an equal volume would be discharged into the sewer system annually. Makeup air units (MAUs) would also be included in the building design to provide ventilation and maintain a positive space pressure in the building for humidity control.

Employees

It is anticipated that up to 30 employees would typically be working in the building during daytime work hours, and up to 10 employees per shift would work in the building in the evening and overnight, for a total of up to 40 employees every 24 hours. As needed, technical support personnel would also be present on the site.

Vehicle Trips

Truck trips would occur during project operation to deliver and remove equipment as needed. Passenger vehicle trips to the site would be minimal, consisting of employees traveling to the site for work and occasional client visits.

Energy Usage

Major sources of energy demand for project operations would be client servers and the cooling system. The project would use an average of 22 MW for a maximum load of 480,000 kilowatt (KW) hours daily. Overall, the daily power usage would vary depending on how many servers are up and running and how intensely the data center's clients are running their servers. The building would require very little lighting. Lighting would be used to support the lobby, corridors, office/conference room, and parking area.

1.5 Construction

Construction would be completed in two phases to coincide with expected power delivery scheduled from SVP. Phase I would involve construction of the data center while Phase II would involve construction of the electrical substation. However, this analysis assumes a continuous construction timeline in order to conservatively capture the greatest possible impacts. The first phase of construction is anticipated to begin in March 2019 with a duration of 16 months. It is not yet known when the second phase of construction would begin but is anticipated to take 10 months for a combined construction period of 26 months.² Conventional construction equipment would be used, such as excavators, backhoes, and both light-duty trucks and heavy-duty dump trucks. Pile driving may be required for construction of the building foundations. Truck trips are expected to reach the project site via US 101 and San Tomas Expressway. Truck trips for off-haul of excavated materials are expected to travel along these same routes and arterials to dispose of construction demolition debris at Newby Island Landfill and other receiver sites.³ Excavation for construction would include utility trenching and foundation excavation. The depth of excavation for utility trenching and foundations would be an average of 6 feet.

1.6 Permits and Approvals

The project applicant is seeking approval from the City of Santa Clara's Architectural Committee. The approval is anticipated after the Architectural Committee considers the application at a publicly noticed meeting. No other public hearings by the Planning Commission or City Council are anticipated.

² To ensure potential impacts are accurately captured, this analysis assumes the second phase of construction would occur immediately following the first phase. As construction emissions are generally projected to decrease in the future as a result of lower-emitting engines, an assumed 25-month continuous construction period beginning in March 2019 represents the worst-case scenario.

³ Because Santa Clara requires project applicants seeking permits for project greater than 5,000 square feet to recycle at least 50 percent of discards, a portion of the truck trips would travel to one or more of Santa Clara's certified Construction and Demolition recyclers.

2 ENVIRONMENTAL IMPACT CHECKLIST

2.1 Aesthetics

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including but not limited to: trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The City of Santa Clara 2010-2035 General Plan (General Plan) is the primary source for identifying and determining scenic vistas and scenic resources throughout Santa Clara. The General Plan does not identify any scenic vistas or view corridors within the City. The General Plan Integrated Environmental Impact Report lists the Santa Cruz Mountains, Diablo range, San Tomas Aquino Creek, and the Guadalupe River as 'visual resources' within the City, but these scenic resources would not be visible from the project site. The project site is not located within close proximity to any natural or historic features that are considered scenic resources by Santa Clara.

Scenic viewsheds are also important factors to consider when analyzing the aesthetic character of a project site. While a scenic vista is typically a singular scene or view, scenic viewsheds are considered to be areas of particular scenic or historic value deemed worthy of preservation against development and other changes. According to the General Plan, the project site is not located within or near any scenic viewsheds. The California Department of Transportation (Caltrans) Scenic Highway Program has not designated any scenic highways or potentially eligible scenic highways in the project site vicinity.¹

¹ California Department of Transportation. *California Scenic Highway Mapping System*. Available: <http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html>. Accessed: August, 2018.

The site is within a fully developed, industrial area of Santa Clara. As detailed in **Section 1, Project Description**, surrounding development consists of one- to two-story office and industrial buildings to the north, east, and west. Other nearby land uses include a US Post Office, wholesale retailers, and a rental car agency. Buildings are generally set back from the street by landscaped areas, fencing, and surface parking. Street trees occur intermittently throughout the area, often breaking up views of existing buildings from the street. Due to existing development, trees, urban infrastructure such as power lines, and slight topographical changes throughout the area, views are generally limited to one or two blocks in each direction when traveling on foot or in a vehicle. Views of the project site are shown in **Figure 4** through **Figure 6**.

The visual character of the project site is an urban built environment. Due to the presence of vegetation and intervening development, the site is only visible from the immediate vicinity along Walsh Avenue. The project site is flat and has perimeter landscaping along Walsh Avenue, as described in **Section 1, Project Description**. The site is currently occupied by a one-story industrial building, two one-story warehouses, and paved parking areas. The existing one-story building that fronts on Walsh Avenue is set back from the roadway by a landscaped area featuring a small lawn, shrubbery, and a paved pedestrian walkway.

a) Would the project have a substantial adverse effect on a scenic vista?

No Impact. The project site is not located in or near any scenic vistas identified by Santa Clara. Additionally, views from the project site are dominated by other office and industrial buildings. Long-range views from the project site are obscured by existing development. Therefore, the project would not impact a scenic vista.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. According to Caltrans' state scenic highway maps, there are no designated or eligible scenic highways in the project site vicinity.⁴ Additionally, the project improvements would be entirely confined to the previously developed site. The existing site does not contain any scenic resources, and no scenic resources are within view of the site. Therefore, the project would not impact scenic resources, such as rock outcroppings or historic buildings within a state scenic highway.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant. The project would be consistent with the existing industrial character of the site. The data center would be three stories taller than the existing buildings on-site, but would be visually consistent within the larger urban context of contemporary office/research and development buildings and data centers in the City. **Figure 2** and **Figure 3** demonstrate the

⁴ California Department of Transportation. *California Scenic Highway Mapping System*. Available: <http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html>. Accessed: August, 2018.

proposed design of the data center, while the existing site and vicinity are shown in **Figure 1**. The exterior design of the data center would be similar to the other data centers in Santa Clara and consistent with other buildings in the project site vicinity. The project would be subject to review by Santa Clara's Architectural Committee, which would ensure the project conforms to Santa Clara's adopted Community Design Guidelines. The guidelines were developed to support community aesthetic values, preserve neighborhood character, and promote a sense of community and place throughout Santa Clara.

New landscaping, including trees, shrubs, and groundcover, would be included along the sidewalk facing Walsh Avenue, on the north and south sides of the generator yard, and throughout the parking area located on the south side of the data center. Perimeter landscaping and the proposed parking lot along Walsh Avenue would create a setback condition similar to both existing conditions and the surrounding area. Similar to existing conditions, views of the project from the street and adjacent parcels would be broken up by trees and landscaping. The visual character of the streetscape would continue to consist of industrial buildings set back from the roadway with fencing and intermittent trees and vegetation. Views through the site are currently obstructed by the existing buildings and trees. With implementation of the project, the building height would be increased and views through the site would be further obstructed. However, obstructed views are consistent with visibility in the project vicinity. Furthermore, there are no scenic views or sensitive viewers in the project vicinity. Views from the project site of the larger surrounding area are generally obstructed by existing industrial buildings. This would not change as a result of the project. Therefore, the project's impact on the visual character and quality of the site and vicinity would be less than significant. No mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant. Under existing conditions, there is exterior lighting throughout the project site vicinity. Existing exterior lighting is typical of industrial areas and is primarily on buildings and in parking lots for safety purposes. Nighttime light conditions are consistent with those generally found in urban environments, and include streetlights, ambient light from adjacent development, and exterior safety lighting. Project operation would require exterior safety lighting similar to the safety lighting found at nearby industrial buildings. Exterior lighting would be limited to safety lighting in the parking lot, building exterior, and along pathways. Lighting would be designed and installed consistent with Santa Clara's design requirements for exterior lighting.

The exterior design of the project does not include large, continuous expanses of uninterrupted glazing which are generally associated with glare, and new major sources of glare are not anticipated. The proposed glazing on the first floor of the building would be at a height and of a size not anticipated to result in notable glare. Additionally, the project would be subject to review by Santa Clara's Architectural Committee, which would ensure the project conforms to Santa Clara's adopted Community Design Guidelines. Therefore, the project would have a less-than-significant impact on day and nighttime views in the area resulting from lighting or glare. No mitigation is required.



View of Project Site from Northeast (Existing Conditions)

Figure



View of Project Site from North (Existing Conditions)

Figure



View of Project Site from Northwest (Existing Conditions)

Figure

2.2 Agriculture and Forestry Resources

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or with a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The California Department of Conservation administers the Farmland Mapping and Monitoring Program (FMMP), California's statewide agricultural land inventory. Four classifications of farmland, including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, are considered valuable. Any conversion of land within these classifications is typically considered an environmental impact under CEQA. Other categories of land that are not protected by the Department of Conservation include Grazing Land, Urban and Built-up Land, and Other Land.

The project site is designated as Urban and Built-up Land by the FMMP.⁵⁶ The FMMP defines the Urban and Built-up Land category as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment, and water control structures.

According to California Public Resources Code (PRC) Section 12220(g), forest land is land that can support 10 percent native tree cover of any species under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

California PRC Section 4526 defines timberland as land that is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Land owned by the federal government and land designated by the State Board of Forestry and Fire Protection as experimental forest land is excluded as timberland.

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use?

OR

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site is currently developed with industrial buildings and is zoned Heavy Industrial (MH). The project site is not designated by the California Natural Resources Agency as farmland of any type and is not the subject of a Williamson Act (a statewide agricultural land protection program) contract.⁷⁸ Additionally, no land adjacent to the project site is designated as farmland. Therefore, implementation of the project would have no impact on farmland and would not conflict with zoning for agricultural use or a Williamson Act contract.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land, timberland, or a timberland production zone (as defined by Public Resources Codes 1220(g), 4526, and 51104(g) respectively?

No Impact. The project site is zoned for heavy industrial uses and does not contain forest land or other similar resources. The project site is currently developed with a light industrial building, two warehouses, and a parking lot. Therefore, the project would not impact forest land or timberland.

⁵ California Department of Conservation, Division of Land Resource Protection. *Santa Clara County Williamson Act FY 2015/2016*. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/SantaClara_15_16_WA.pdf. Accessed July, 2018.

⁶ California Department of Conservation, Division of Land Resource Protection. *Santa Clara County Important Farmland 2014*. Available: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/scl14.pdf>. Accessed: July 16, 2018.

⁷ California Department of Conservation, Division of Land Resource Protection. *Santa Clara County Williamson Act FY 2015/2016*. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/SantaClara_15_16_WA.pdf. Accessed: July, 2018.

d) Would the project result in a loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed in **question 2.2 “c”**, there is no forest land on the project site and none of the properties adjacent to the project site or in the vicinity contain forest land. Therefore, implementation of the project would not impact forest land or result in the conversion of forest land to non-forest use.

e) Would the project involve other changes in the existing environment which, due to their location and nature, could result in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. See responses to **questions 2.2 “a” through “d”** above.

2.3 Air Quality

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following discussion is based in part on an air quality assessment prepared for the project in August 2018. A copy of this report is included as **Appendix A** to this Initial Study. Subsequent to preparation of the air quality assessment, more detailed information about specific backup generator selections became available. To ensure that the air quality assessment captured the worst-case scenario, a memorandum was prepared comparing the refined backup generator specifications against those used in the air quality assessment. This comparison confirmed that the results of the air quality assessment remain accurate. This memorandum is also included in **Appendix A**.

Setting

The project is located in Santa Clara County, within the San Francisco Bay Area Air Basin (SFBAAB). Ambient air quality standards have been established at both the State and Federal level for the SFBAAB. The Bay Area currently meets all ambient air quality standards with the exception of ground-level ozone (O₃), respirable particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}). High O₃ levels are caused

by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx) and can aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort. High particulate matter levels can aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

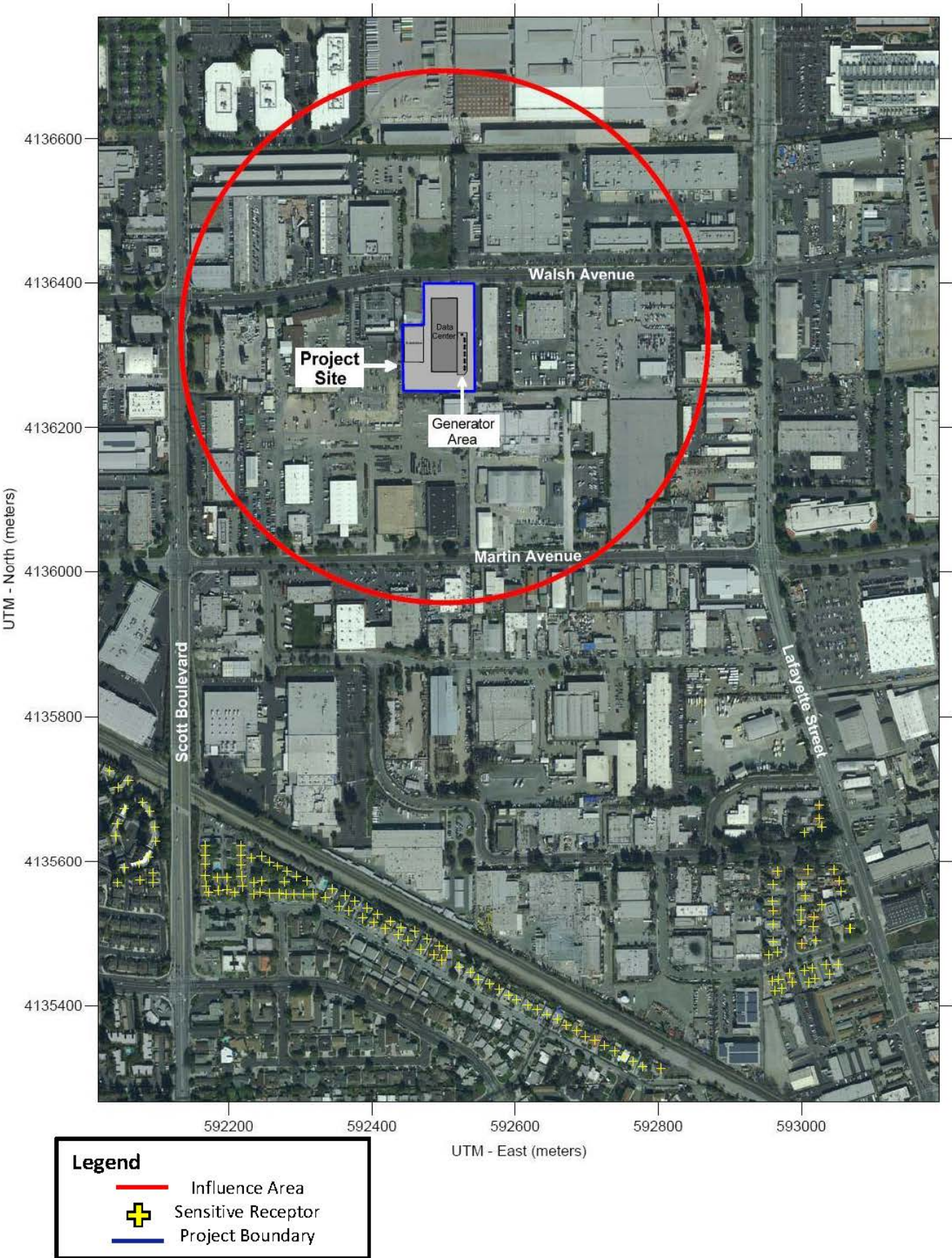
Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and Federal level.

The California Air Resources Board (CARB) and the U.S. EPA have adopted and implemented a number of regulations and emission standards for stationary and mobile sources to reduce emissions of diesel particulate matter (DPM). These include emission standards for off-road diesel engines, including diesel generators, and regulatory programs that affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways.

Sensitive Receptors

CARB has identified the following persons who are most likely to be affected by air pollution: infants, children under 18, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, churches and places of assembly, and parks. The closest sensitive receptors to the project site are existing residences approximately 2,160 feet southwest. There are additional sensitive receptors along Lafayette Street about 2,440 southeast of the project site.

Figure 7 shows the project setting, a 1,000-foot influence area, and the closest sensitive receptors.



Project Site, Influence Area, and Nearest Sensitive Receptors

Figure

BAAQMD

The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California EPA) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published CEQA Air Quality Guidelines that are used in this analysis to evaluate air quality impacts.⁹

Santa Clara 2010-2035 General Plan

The Santa Clara 2035 General Plan includes goals and policies to reduce exposure of Santa Clara's sensitive population to exposure of air pollution and TACs. The following goals, policies, and actions are applicable to the project:

Air Quality Goals

- 5.10.2-G1 Improved air quality in Santa Clara and the region.
- 5.10.2-G2 Reduced greenhouse gas (GHG) emissions that meet the State and regional goals and requirements to combat climate change.

Air Quality Policies

- 5.10.2-P1 Support alternative transportation modes and efficient parking mechanisms to improve air quality.
- 5.10.2-P2 Encourage development patterns that reduce vehicle miles traveled and air pollution.
- 5.10.2-P3 Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.
- 5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.
- 5.10.2-P5 Promote regional air pollution prevention plans for local industry and businesses.
- 5.10.2-P6 Require "Best Management Practices" for construction dust abatement.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The City has consistently applied the BAAQMD thresholds in its environmental documents.

⁹ Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines*.

The significance thresholds identified by BAAQMD and used in this analysis are summarized in **Table 2-1**. The BAAQMD's significance thresholds are described in their latest version of their BAAQMD CEQA Air Quality Guidelines issued in May 2017.

Table 2-1 BAAQMD Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO	N/A	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other BMPs	N/A	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual PM _{2.5}	>0.3 µg/m ³	>0.8 µg/m ³	

Source: Illingworth and Rodkin, 2018

Note: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = coarse particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM_{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. The City of Santa Clara does not have a "construction dust ordinance," but requires BMPs for the control of fugitive dust.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant. The project would conflict with or obstruct implementation of BAAQMD's 2017 Clean Air Plan (Clean Air Plan) if it would be inconsistent with regional growth assumptions, in terms of population, employment, or regional growth in Vehicle Miles Traveled (VMT). The emission strategies in the Clean Air Plan were developed, in part, on regional population, housing, and employment projections prepared by the Association of Bay Area Governments (ABAG). Because data center uses are allowed under the project site's existing zoning (MH), it can be assumed that the project's use is already accounted for in the Clean Air Plan.

The consistency of the project with the Clean Air Plan is primarily a question of the consistency with the population, land use, and employment assumptions utilized in developing the Clean Air Plan, which were based on ABAG Projections. The project would not affect population as it would not include new housing or create a major source of employment. Implementation of the project would add a permitted data center use on the project site and would therefore not affect land use assumptions or VMT forecasts used for Clean Air Plan projections. Consequently, development of the project would not conflict with population, land use, or VMT projections used to develop the Clean Air Plan planning projections. This impact would be less than significant and no mitigation would be required.

b) Would the project violate any air quality standards or contribute substantially to an existing air quality violation?

Less than Significant with Mitigation. The Bay Area is considered a nonattainment area for ground-level O₃ and PM_{2.5} under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM₁₀ under the California Clean Air Act, but not the federal Act. The area has attained both State and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O₃, PM₁₀ and PM_{2.5}, BAAQMD has established thresholds of significance for air pollutants. These thresholds are for O₃ precursor pollutants (ROG and NO_x), PM₁₀ and PM_{2.5} and apply to both construction period and operational period impacts.

Both construction and operational emissions were computed using the California Emissions Estimator Model, Version 2016.3.2 (CalEEMod). In addition, emissions from routine testing and maintenance of the standby emergency generators were computed using emissions data published by the emergency generator manufacturer and assuming maximum allowable testing conditions.

Construction Period Emissions

CalEEMod provided construction emissions estimates in tons per year. Average daily emissions were based on a construction start date of March 2019 and a duration of 25 months. Total and average daily construction emission from full build-out of the project (i.e. build-out of the entire site) are shown in **Table 2-2**. As indicated in **Table 2-2**, anticipated construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2-2 Construction Period Emissions

Description	ROG Emissions	NO _x Emissions	PM ₁₀ Exhaust Emissions	PM _{2.5} Exhaust Emissions
Total construction emissions (tons)	1.22	3.90	0.19	0.17
<i>Average daily emissions (pounds/day)</i>	<i>8.16</i>	<i>26.09</i>	<i>1.27</i>	<i>1.14</i>
<i>BAAQMD Thresholds (pounds/day)</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Significant?	No	No	No	No

Source: Illingworth & Rodkin, 2019

Note: Average daily emissions were computed by dividing total construction emissions by the number of workdays. As stated in the Project Description, construction is scheduled to begin in March 2019 and be completed in 2021, a total of 25 months. However, a construction schedule and projected equipment usage for these phases were not available. Therefore, in order to provide a conservative analysis, the appropriate CalEEMod default assumption of 299 construction days was used.

Grading and construction activities would generate dust. 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, and do not include sensitive receptors. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. This impact is considered less-than-significant with implementation of **Mitigation Measures AQ-1**.

Mitigation Measure AQ-1: Include basic measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant level. The contractor shall implement the following best management practices that are required of all projects:

- 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 miles per hour.

- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the 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.

Operational Emissions

Operational emissions were computed on an annual basis for the project with land uses input to CalEEMod as described above for the construction period modeling. The primary emission sources associated with operation of the project would be from engine operation during testing or maintenance of the ten 3,250-kW and one 1,000-kW emergency backup generators. There would also be emissions from traffic and area sources associated with operation of the data center facilities. Emissions from these sources are described below.

The generators would be housed in individual enclosures located in the generator yard adjacent to the eastern wall of the data center. The 11 generators would have a combined diesel fuel storage capacity of 67,000 gallons. Due to the low volatility of diesel fuel there would be minor evaporative emissions of ROG. Operation of the substation would result in negligible daily operational emissions.¹⁰

The operation of emergency 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.¹¹ **Table 2-3** provides a summary of the total operational emissions for the project.

¹⁰ Operational emissions from the substation were assumed to be less than one pound per day of each criteria air pollutant and no modeling was conducted.

¹¹ California Air Resources Board. *Airborne Toxic Control Measures for Stationary Compression Ignition (CI) Engines*. 17 Cal. Code of Regs. §§ 93115 – 93115.15.

Table 2-3 Total Project Operational Emissions

Emission Source	ROG	NO _x	PM ₁₀	PM _{2.5}
<i>BAAQMD Threshold</i>	10 (54)	10 (54)	15 (82)	10 (54)
Data Center Mobile and Area	0.8 (4.4)	0.4 (2.2)	0.2 (1.1)	0.06 (0.3)
Emergency Generators (11) – Maximum emissions Scenario (50 hrs/engine per year at near full load)	0.2 (1.0)	8.8 (47.9)	0.1 (0.6)	0.1 (0.5)
Project Emissions	1.0 (5.4)	9.2 (50.1)	0.3 (1.7)	0.2 (0.8)
Significant?	No	No	No	No

Source: Illingworth & Rodkin, 2019

Note: Averages assume the project would operate 365 days per year. The first number in each cell is the annual emissions (tpy), and the second number is the daily emissions (lb/day).

As shown in **Table 2-3**, total emissions from the project would not exceed the significance thresholds established by BAAQMD. Therefore, operation impacts would be less than significant.

- c) **Would the project 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?**

Less than Significant with Mitigation. Past, present, and future development projects contribute to the region's adverse air quality impacts in a cumulative manner, and by its nature, air pollution is a cumulative impact. No single project is sufficient in size itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to the 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.

The BAAQMD CEQA Guidelines state that if a project exceeds the significance thresholds for average daily or annual emissions of operational-related pollutants or precursors, its emissions would be cumulatively considerable, resulting in significant cumulative air quality impact to the region's existing air quality conditions. As detailed in **question 2.3 "b"**, with **Mitigation Measure AQ-1** the project would not exceed the BAAQMD's pollutant emissions thresholds. Therefore, with mitigation the project's contribution to cumulative air quality impacts would be less than significant.

- d) **Would the project expose sensitive receptors to substantial pollutant concentrations?**

Less than Significant. As discussed above, certain groups of people are more affected by air pollution than others. These groups are considered to be sensitive receptors. Locations that may contain sensitive receptors include residential areas, hospitals, daycare facilities, elementary schools and parks. As shown in **Figure 7**, the closest sensitive receptors to the project site are existing residences located approximately 2,160 feet south west of the project site west of Scott Boulevard, and along Lafayette Street about 2,440 feet southeast of the southern project boundary.

The project would be a source of air pollutant emissions during construction and operation, with the main source being emergency generators testing and maintenance. These diesel fueled generators emit diesel particulate matter (DPM), which is a toxic air contaminant (TAC). The generators are also a source of PM_{2.5}, which has known adverse health effects.

The BAAQMD CEQA Air Quality Guidelines consider exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. BAAQMD recommends a 1,000-foot zone of influence around project boundaries, as shown in **Figure 7**. Since construction activities are temporary and would occur well over 1,000 feet from the nearest sensitive receptor community risk impacts from construction activities would be less than significant.

Potential health impacts from generators testing and maintenance during project operation 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 vicinity of the data center site. 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.

The maximum modeled annual DPM and PM_{2.5} concentration from operation of the generators at the data center was 0.0027 µg/m³ at residential receptors southeast of the project site on Lafayette Street. Concentrations at all other existing residential locations would be lower than the maximum concentration.

Based on the maximum modeled DPM concentrations that assume operation for 50 hours per year per generator, maximum increased cancer risks and non-cancer health impacts were calculated using BAAQMD recommended methods. The maximum increased cancer risk would be 2.0 in one million and the maximum hazard index would be less than 0.01 from operation of the emergency generators and would be below the BAAQMD significance thresholds. Therefore, this impact would be less than significant. No mitigation is required.

e) Would the project create objectionable odors affecting a substantial number of people?

Less than Significant. The project would not create a new source of objectionable odor during project construction or operation. Once operational, the data center itself is not expected to produce any offensive odors that would result in odor complaints, based on BAAQMD's guidelines for odor-generating uses and activities. Therefore, the impact would be less than significant. No mitigation is required.

2.4 Biological Resources

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse impact 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an established resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The project site is surrounded by industrial buildings, office development, and surface parking lots within the larger urban context of Santa Clara. The majority of the project site is paved with the exception of a landscaped area facing Walsh Avenue featuring a small lawn, shrubbery, and a paved pedestrian walkway. A carob tree and four California walnut trees are located along the western portion of the property. The project site is separated from adjacent parcels by concrete and asphalt paving to the east, and south and by Walsh Avenue to the North. The project site is adjacent to a concrete and asphalt paved parking lot to the west.

Construction of the data center and parking lot would require removal of all 8 trees on-site, none of which are protected under Santa Clara's General Plan policies. For further information regarding tree removal, see the discussion under **question 2.4 "e"** below. There are no natural areas on the site; all vegetation consists of ornamental landscaping installed and maintained by the current owner of the property. The site does not contain watercourses or any bodies of water. The closest open space to the project site is Rotary Park, a small green space with children's play equipment and picnic tables located approximately 0.8 mile south of the project site. The park is separated from the project site by intervening urban development, major roadways, and the Caltrain tracks.

Due to the relatively low amounts of vegetation on site and the urban context, the possibility of wildlife habitat is considered to be unlikely. Generally, wildlife habitats in developed urban areas, such as the project site, are low in species diversity. Species that may use the project site would be predominantly urban adapted birds, such as rock doves, mourning doves, mockingbirds, house sparrows, and finches. Raptors (birds of prey) and other urban birds could use trees on the project site for nesting or as a roost. Raptors and other migratory birds are protected by the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.).

There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans in effect that include the project site.¹²

- a) Would the project 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 Game or US Fish and Wildlife Service?**

Less than Significant with Mitigation. Due to the highly developed nature of the area and lack of suitable habitat for special-status species, no special-status plant or animal species are expected to occur within the project site. However, it is possible that on-site trees could provide nesting habitat for migratory birds. The MBTA protects active nests, adults, eggs, and young of most species of birds. The project would remove 8 trees from the project site, and therefore may have a potential impact upon nesting birds. If nesting birds were present within or adjacent to the project site during

¹² Santa Clara Valley, 2018. *Habitat Agency Browser*. Available: <http://www.hcpmaps.com/habitat/>. Accessed: August, 2018.

construction, construction activities could result in the abandonment of active nests or direct mortality to birds. However, **Mitigation Measure BIO-1** would be implemented prior to and during construction activities for the purpose of minimizing risks to migratory birds.

Mitigation Measure BIO-1: In order to reduce impacts to biological systems and communities, the following measures shall be implemented:

- Schedule tree removal activities between September 1 and January 31 (inclusive) to avoid the nesting season (including for raptors) and no additional surveys would be required.
- If construction tree removal would take place between February 1 and August 31, pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed.
- Surveys will be completed no more than seven days prior to the initiation of site clearing or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., shrubs) in and immediately adjacent to the construction area for nests.
- If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species). This will ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation.
- A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Planning Department prior to the start of construction.

With implementation of **Mitigation Measure BIO-1**, nesting birds would be protected from disturbance and other direct and indirect impacts from construction. Therefore, project impacts would be less than significant with mitigation.

b) Would the project 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 California Department of Fish and Game or US Fish and Wildlife Service?

Less than Significant. The project site is developed with single-story industrial buildings, asphalt, and surface parking areas. The site is surrounded by industrial development with limited cover and foraging habitat for wildlife. The closest natural area to the project site is the grassland surrounding the runways at SJC approximately 0.75 mile east of the site. There is no aquatic, wetland, or riparian habitat, or other sensitive natural communities within the project site. The closest water body to the project site is San Tomas Aquino Creek, which is located approximately 0.75 mile west and is separated from the site by intervening industrial and commercial development and major roadways. If any sensitive communities are present at San Tomas Aquino Creek, their movement to the project site from the Creek would be prevented by intervening development. Development at the project

site would not reasonably be anticipated to directly or indirectly impact any sensitive communities at the Creek. Therefore, the project would have a less-than-significant impact on any riparian habitat or other sensitive natural community as identified at the local, state, or federal level. No mitigation is required.

- c) **Would the project 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?**

No Impact. As previously discussed, the project site and surrounding area are paved and developed with industrial uses. The San Tomas Aquino Creek is the closest aquatic feature and is located approximately 0.75 mile west. As there are no watercourses, seasonal wetlands, or other potential waters of the US on site or within the immediate vicinity, the project would not result in direct removal, filling, hydrological interruption, or other indirect impacts to jurisdictional wetlands.

- d) **Would the project 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?**

Less than Significant with Mitigation. The project site was previously developed and is surrounded by industrial and office development, which preclude major wildlife movement. The project site is located in close proximity to heavily traveled roadways including US-101, San Tomas Expressway, and Central Expressway. Existing opportunities for wildlife movement on site and within the project vicinity are profoundly constrained by heavily traveled roadways and the lack of continuous or connected natural areas.

Migratory birds may nest in trees located within the boundaries of the project site. However, as the project would replace removed trees at a ratio of greater than 2:1 (8 trees removed and 18 new trees planted), nesting birds would not be permanently displaced. With implementation of **Mitigation Measure BIO-1**, nesting birds would be protected from disturbance and other direct and indirect impacts from construction. Thus, with mitigation the project would result in a less-than-significant impact on the migratory movement of wildlife species.

- e) **Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Less than Significant. The provision of landscaping and trees in the community is addressed in both the Santa Clara General Plan and Santa Clara City Code. General Plan Policy 5.10.1-P4 states Santa Clara will protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other healthy 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. General Plan Policy 5.3.1 P10 calls for new development to provide street trees and a minimum 2:1 on- or off-site replacement of trees removed as part of a development proposal.

A total of 8 trees (evergreen, magnolia, palm, carob, and walnut) are proposed for removal. None of these trees are protected species, and no street trees would be removed. Two of the trees that would be removed are walnut trees (*Juglans nigra*), both of which have circumferences of approximately 40". Both trees have been poorly maintained and represent hazards due to large columns of decay in the main trunk and basal area. Therefore, these trees have been recommended for removal.¹³ Per Santa Clara requirements, replacement replanting of two 24" box trees on the property after construction would be required.

Additionally, as required by the General Plan, all of the trees removed would be replaced at a 2:1 ratio, which requires 16 replacement trees, at a minimum. The project would include the planting of 28 new trees on site. Therefore, implementation of the project would not conflict with policies or ordinances for biological resources including tree protection, and the impact would be less than significant. No mitigation is required.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. No habitat conservation plan or natural community conservation plans have been adopted that include the project site. The Santa Clara Valley Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) encompasses 519,506 acres located in Santa Clara County and was adopted in 2013 by all local participating agencies. The HCP/NCCP expanded boundaries include land just north of the US-101, roughly 0.75 miles north of the project site. The project site and immediate vicinity are not located within the boundaries of the Santa Clara Valley HCP/NCCP study area and the City of Santa Clara is not a member jurisdiction of the Habitat Plan.¹⁴ Therefore, the project is not subject to the obligations imposed upon member agencies and implementation of the project would not conflict with the plan, and no impact would occur.

¹³ Serrano's Expert Tree Services, Inc. 2018. *Arborist Report*.

¹⁴ Santa Clara Valley Habitat Agency. Santa Clara Valley Habitat Plan, Chapter 3: Physical and Biological Resources. Available: <http://scv-habitatagency.org/DocumentCenter/Home/View/125>. Accessed: July, 2018.

2.5 Cultural Resources

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

A records search of the California Historical Resources Information System (CHRIS) was completed for the project site, dated April 30, 2018 and is included as **Appendix B** to this Initial Study. Additionally, a Native American Heritage Commission (NAHC) Sacred Lands File search was completed on April 10, 2018. The project site is developed with three single-story buildings, asphalt, and surface parking areas. Currently vacant, the site's most recent use included an auto body shop with two associated corrugated metal warehouses. Of the three existing buildings, one was constructed in 1952, with a warehouse added in 1962. Two other steel warehouse buildings were subsequently constructed between 1962 and 1974. Because two of the buildings on-site are more than 45 years old, the structures meet the minimum age criteria for California Register of Historic Places (CRHP) and National Register of Historic Places (NRHP) eligibility evaluation.¹⁵ Therefore, a site evaluation was performed to determine the eligibility of the existing structures. A memorandum summarizing the findings of this evaluation is attached as **Appendix C**.

¹⁵ Per the CEQA Statute and Guidelines, historical resources include properties listed in or formally determined eligible for listing in any local, state or federal register. All properties formally determined eligible for the NRHP are thereby listed in the California Register and are historical resources pursuant to CEQA.

a) **Would the project cause a substantial adverse change in the significance of an historic resource as defined in Public Resources Code section 15064.5?**

No Impact. As previously discussed, a site evaluation was conducted and a Department of Parks and Recreation (DPR 523) form and summary memo were prepared for the project site (**Appendix C**). Based on the site evaluation and a review of historical records, the existing buildings on the project site are not eligible for the listing in the NRHP or CRHR because they are not:

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Associated with the lives of persons important in our past;
3. Exemplary of the distinctive characteristics of a type, period, region, or method of construction, or representative of the work of an important creative individual, or possesses high artistic values; or,
4. Likely to yield information important in prehistory or history (State CEQA Guidelines Section 15064.5(a)(3)).

The buildings are not contributing resources to a CRHR eligible historic district, nor do they appear to be eligible under Santa Clara's "Criteria for Local Significance" because they are not culturally, historically, or architecturally significant. Therefore, no historic resources are present on site and no impact would occur.

b) **Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code section 15064.5?**

Less than Significant with Mitigation. The project site has previously been disturbed for construction of the existing buildings and parking lot surface pavement. Construction of the project would require excavation for grading, utility trenching, and building foundations. The depth of such excavations would be an average of 6 feet. Although archeological resources have not been previously reported at the site, the CHRIS records search concluded that the project site has a moderate potential of identifying historic-period and Native American archaeological resources. Additionally, development over the past 50-80 years has disturbed the upper layers of soil, significantly reduced the potential for subsurface cultural resources.¹⁶ In the event that archeological resources are uncovered during subsurface disturbance activities, **Mitigation Measure CUL-1** would be implemented to reduce potential impacts to a less-than-significant level.

Mitigation Measure CUL-1: In the event archaeological resources are encountered during construction, work shall be halted within 100 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations.

¹⁶ Basin Research Associates, 2018.

If an archaeological resource is encountered in any stage of development, a qualified archaeologist will be consulted to determine whether the resources qualify as historical resources or unique archaeological resources. In the event that the encountered resources qualify, the archaeologist will prepare a research design and archaeological data recovery plan to be implemented prior to resuming construction at the affected area. The archaeologist shall also prepare a written report of the finding, file it with the appropriate agency, and arrange for curation of recovered materials.

c) Would the project directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?

Less than Significant with Mitigation. The project site has previously been disturbed for construction of the existing buildings surface pavement. Construction of the project would require ground-disturbing activities at an average depth of 6 feet. This shallow depth of excavation is likely to remain within layers of previously disturbed soil; however, in the event that paleontological resources are discovered during site development, implementation of **Mitigation Measure CUL-2** would mitigate this potentially significant impact to a less-than-significant level.

Mitigation Measure CUL-2: In the event paleontological specimens are discovered during any phase of the project, work shall be suspended within 100 feet of the discovered materials until the significance of the find and recommended actions are determined by a qualified archaeologist or paleontologist.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation. As previously discussed, the project site is currently developed and no known cultural resources are located at the project site. Although unlikely, it is possible that unmarked burials may be unearthed during project construction. In the event that human remains are discovered during construction, the project applicant would comply with the California Health and Safety Code Section 7050.5 regarding human remains, and the California Public Resources Code Section 5097.98 regarding the treatment of Native American human remains. In addition, **Mitigation Measure CUL-3** would be implemented to reduce potential impacts to a less-than-significant level.

Mitigation Measure CUL-3: In the event that human remains are discovered during project construction, all activity within a 50-foot radius of the site shall be halted. 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.

2.6 Geology and Soils

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

No known active or potentially active faults cross the project site, and the project site is not within an Earthquake Fault Zone as delineated by the Alquist-Priolo Earthquake Fault Zoning Act. However, the project site is located within a Liquefaction Zone.¹⁷ While the project is not within an Earthquake Fault Zone, the San Francisco Bay Area region has several known seismically active faults, making the area subject to strong ground shaking in the event of an earthquake.

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. A project-specific geotechnical investigation including field exploration, laboratory testing, and engineering analysis was completed for the project site in November of 2017, and the report is included in its entirety as **Appendix D** to this Initial Study.

Soil conditions at the project site include undocumented artificial fill materials present below existing pavement sections and extending to depths of approximately 1.5 to 3 feet below existing grade. Such fill materials consist of medium stiff fat clays with minor amounts of fine sand. Soil borings completed for the site extended to 45 feet below ground surface and found medium stiff to stiff lean and fat clays with variable amounts of sand. The project site is located within State of California and County of Santa Clara Seismic Hazard Zones for liquefaction with soils that possess a high susceptibility to liquefaction. Ground water was encountered at depths ranging from approximately 12 to 13 feet below current grade. Fluctuations in groundwater levels are common due to seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map issued by the state geologist for the area or based on other substantial evidence of a known fault?**

Less than Significant. The closest faults to the project site are the Silver Creek fault (located approximately 2.25 miles away), Hayward–S Extension fault (6.5 miles away), Monte Vista Shannon Fault (7.25 miles away), and the Hayward Fault (8.25 miles away). The site is not within a currently established State of California Earthquake Fault Zone or Santa Clara County Geologic Hazard Zone for surface fault rupture hazards. No active or potentially-active faults are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of project is low. Due to the distances of faults from the project site, and the absence of known faults within or near the project site, implementation of the project would not expose people or buildings to known risks of fault rupture. Given this, the impact would be less than significant with implementation of the project. No mitigation is required.

¹⁷ California Geological Survey. 2002. Earthquake Zones of Required Investigation, San Jose West Quadrangle. Available: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/SAN_JOSE_WEST_EZRIM.pdf. Accessed: August, 2018.

ii. Strong seismic ground shaking?

Less than Significant. Earthquakes along several nearby active faults in the region could cause moderate to strong ground shaking at the project site. The intensity of the earthquake ground motions and the damage done by shaking would depend on the characteristics of the generating fault, distance to the fault and rupture zone, earthquake magnitude, earthquake duration, and site-specific geologic conditions. Given that the entire San Francisco Bay Area region is subject to strong seismic ground shaking during a large earthquake event, the project would not expose people or structures to any greater risks involving seismic ground shaking than would other development located in the region.

While the potential for seismic ground shaking cannot be eliminated, the building would be constructed to comply with the 2016 California Building Code (CBC) and other applicable standards and practices for earthquake resistant construction. Compliance with these standards and practices reduce the risks associated with strong seismic ground shaking at the project site. Therefore, impacts related to seismic ground shaking would be less than significant. No mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant with Mitigation. Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a significant 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. 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 as well as a Santa Clara County Liquefaction Hazard Zone. Soil tests conducted for the project site have indicated that several layers could potentially experience liquefaction. In general, these liquefiable layers are less than 3 feet thick and located more than 15 feet below existing grade at the site. The likely consequence of potential liquefaction at the site would be settlement. Total ground surface settlements on the order of 1.5 inch or less may result from liquefaction or ground softening after a seismic event (see **Appendix D**). As previously mentioned, the project would be constructed in compliance with the 2016 CBC, including all applicable seismic standards for structures. Compliance with the 2016 CBC reduces potential risks associated with settlement from seismically-induced liquefaction. Additionally, **Mitigation Measure GEO-1** would be required to further reduce the risk of settlement from liquefaction.

Mitigation Measure GEO-1: To reduce risks associated with liquefaction, the project will be built using standard engineering and seismic safety design techniques. Building design and construction at the site shall be completed in conformance with the recommendations of the project-specific geotechnical investigation (**Appendix D**). Such recommendations include, but are not limited to, the use of rammed aggregate piers or deep foundations to maintain structural integrity in the event of liquefaction caused by a seismic event. The buildings shall meet the requirements of applicable Building and Fire Codes, including the most current

California Building Code, as adopted or updated by Santa Clara. The project shall be designed to withstand soil hazards identified on the site and the project shall be designed to reduce the risk to life or property on site and off site to the extent feasible and in compliance with the Building Code.

iv. Landslides?

No Impact. The project site and surrounding area is relatively flat and do not have any steep slopes or hillsides that would be susceptible to landslides. The project would not, therefore, be exposed to landslide-related hazards. No impact would occur.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant. Project construction would involve ground disturbing activities that would temporarily expose soils and increase the potential for soil erosion from wind or stormwater runoff. The project would be subject to the requirements of Provision C.3 of Santa Clara's National Pollutant Discharge Elimination System (NPDES) permit and would be required to comply with Santa Clara's Best Management Practices for erosion and sedimentation control during the construction period, as outlined in the NPDES permit. Additionally, the project would be subject to a post-construction NPDES Permit and Provision C.3 requirements, ensuring that the project would not include areas of exposed topsoil. This is described in detail in **Section 2.9, Hydrology and Water Quality**. As a result, impacts related to erosion and loss of topsoil would be less than significant and no mitigation is required. No mitigation is required.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant. 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. There are no stream channels on or adjacent to the site that would be subject to lateral spreading.

Based on the site-specific geotechnical report, subsurface conditions at the project site are generally stable with a low potential for minor settlement (up to 1.5 inches). The project would be designed and constructed in accordance with standard engineering safety techniques and in conformance with the requirements of applicable, current Building and Fire Codes, including the 2016 CBC, as adopted by Santa Clara. As described above, the project site is not at risk of lateral spreading, landslides, or significant liquefaction. Therefore, impacts related to soil stability would be less than significant and no mitigation is required.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life and property?

Less than Significant with Mitigation. Some of the soils encountered during geotechnical review were expansive. As a result, researchers estimated that soils within 5 feet of the finished project

grade would consist of low to moderately expansive materials (see **Appendix D**). To avoid risks associated with expansive soils, foundation design would be reviewed and approved by City engineers for compliance with the 2016 CBC general foundation design standards. **Mitigation Measure GEO-2** would be implemented to reduce potential impacts from expansive soils to a less-than-significant level.

Mitigation Measure GEO-2: To reduce potential damage to the planned structures, the following measures shall be implemented:

Construction

- Scarification and Drying: The upper 12 inches of pavement subgrade should be scarified, moisture conditioned to at least 2 percent over optimum and compacted to at least 92 percent relative compaction. Prior to placing aggregate base, the finished subgrade should be proof-rolled with a laden water truck (or similar equipment with high contact pressure) to verify stability. Removal and Replacement: As an alternative to scarification, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials.
- Import Soils: Evaluation of potential import sources for the site should consider the acceptable range of plasticity, especially in the upper 2-3 feet of fill.
- Chemical Treatment: Where the unstable area exceeds about 5,000 to 10,000 square feet and/or site winterization is desired, chemical treatment with quicklime, kiln-dust, or cement may be more cost-effective than removal and replacement.

Design and Operation

- Where concrete paving will be utilized for support of vehicles, the concrete shall be a minimum of 6 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Footings shall extend below the zone of seasonal moisture fluctuation.
- Moisture changes in the surficial soils shall be limited by using positive drainage away from buildings as well as limiting landscaping watering

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Santa Clara sewer utility system would treat wastewater generated by the project. The project site is connected to existing wastewater mains. The project does not include septic tanks and therefore no impact would occur.

2.7 Greenhouse Gas Emissions

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Unlike emissions of criteria and toxic air pollutants, Greenhouse Gases (GHGs) have a broader, global impact. GHGs such as carbon dioxide (CO₂), methane, water vapor and nitrous oxide (NO_x) occur naturally in the earth's atmosphere and are responsible for maintaining the earth's surface temperature. Compounds such as chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride are byproducts of human economic activities like fossil fuel combustion and act as GHGs. While natural levels of GHGs keep the earth comfortable, these human-generated compounds pose various adverse effects and result in global warming. The continued release of GHGs at or above current rates would continue to increase average global surface temperatures and would alter the planet's climate, creating significant long-term local, regional, and global impacts.

BAAQMD has adopted thresholds of significance to assist in the review of operational GHGs under CEQA. BAAQMD has not adopted a threshold for construction-period GHG emissions, as GHG emission impacts reflect the long-term and cumulative effect of GHG on a global scale, while construction-period emissions are intermittent and temporary. These thresholds are designed to establish the level at which GHG emissions would cause significant environmental impacts. The significance thresholds identified by BAAQMD are:

- Consistency with a qualified GHG Reduction Strategy (such as a climate action plan) OR
- Emissions below 1,100 MT of CO₂e per year per project OR

- Emissions below 4.6 MT CO₂e per service population per year.¹⁸

However, the current thresholds set by BAAQMD, and the goals of Santa Clara’s Climate Action Plan, were established to achieve the state’s 2020 GHG reduction target. Because the project is not anticipated to be operational until 2020, an analysis of consistency with the state’s post-2020 GHG reduction goals is appropriate. While the achievement of 2020 GHG reduction goals could – in part – reasonably be attained through local reductions in GHGs, such as those outlined in CAPs, the attainment of 2030 goals and beyond increasingly requires sector-wide and statewide policy changes to address GHG emissions. Many of these actions are outside of the jurisdiction and/or capacity of individual municipalities.

For example, in the energy sector, renewable energy production sources (such as wind and solar energy) must comprise 50 percent of all retail sales statewide by 2030. Additionally, the post-2020 Cap and Trade program has been designed to capture 80 percent of statewide GHG emissions. A more detailed list of actions required to achieve 2030 goals is provided below. Therefore, in this analysis, the project is compared to the City’s CAP for the project’s opening year (2020), and additionally is evaluated for overall GHG reductions consistent with 2030 statewide goals.

Applicable Plans, Policies and Regulations

A number of plans, policies and regulations have been adopted by agencies at the national, state, and local levels to control GHG emissions. Several key plans and policies are described below. In addition relevant plans and policies are discussed in detail in **Appendix A**.

California Assembly Bill 32

With the passage of Assembly Bill 32 (AB 32, Global Warming Solutions Act of 2006), the State of California made a commitment to reduce GHG emissions to 1990 levels by 2020, which represents about a 30 percent decrease over 2006 levels. In December 2008, CARB approved the Climate Change Scoping Plan, which provided a comprehensive set of actions designed to reduce California’s dependence on oil, diversify energy sources, save energy, and enhance public health, among other goals. Per AB 32, the Scoping Plan must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal.

Executive Order B-30-15 and Senate Bill 350

In April 2015, the Governor issued Executive Order B-30-15, which established a GHG reduction target of 40 percent below 1990 levels by 2030. Senate Bill 350 (SB 350) advanced these goals through two measures. First, the law increases the renewable power goal from 33 percent renewables by 2020 to 50 percent by 2030. Second, the law requires the California Energy Commission (CEC) to establish annual

¹⁸ The 4.6 MT CO₂e/Service Population/year threshold is intended for land use development projects including residential, commercial, industrial, and public land uses and facilities. This threshold does not apply to stationary source projects (BAAQMD 2017).

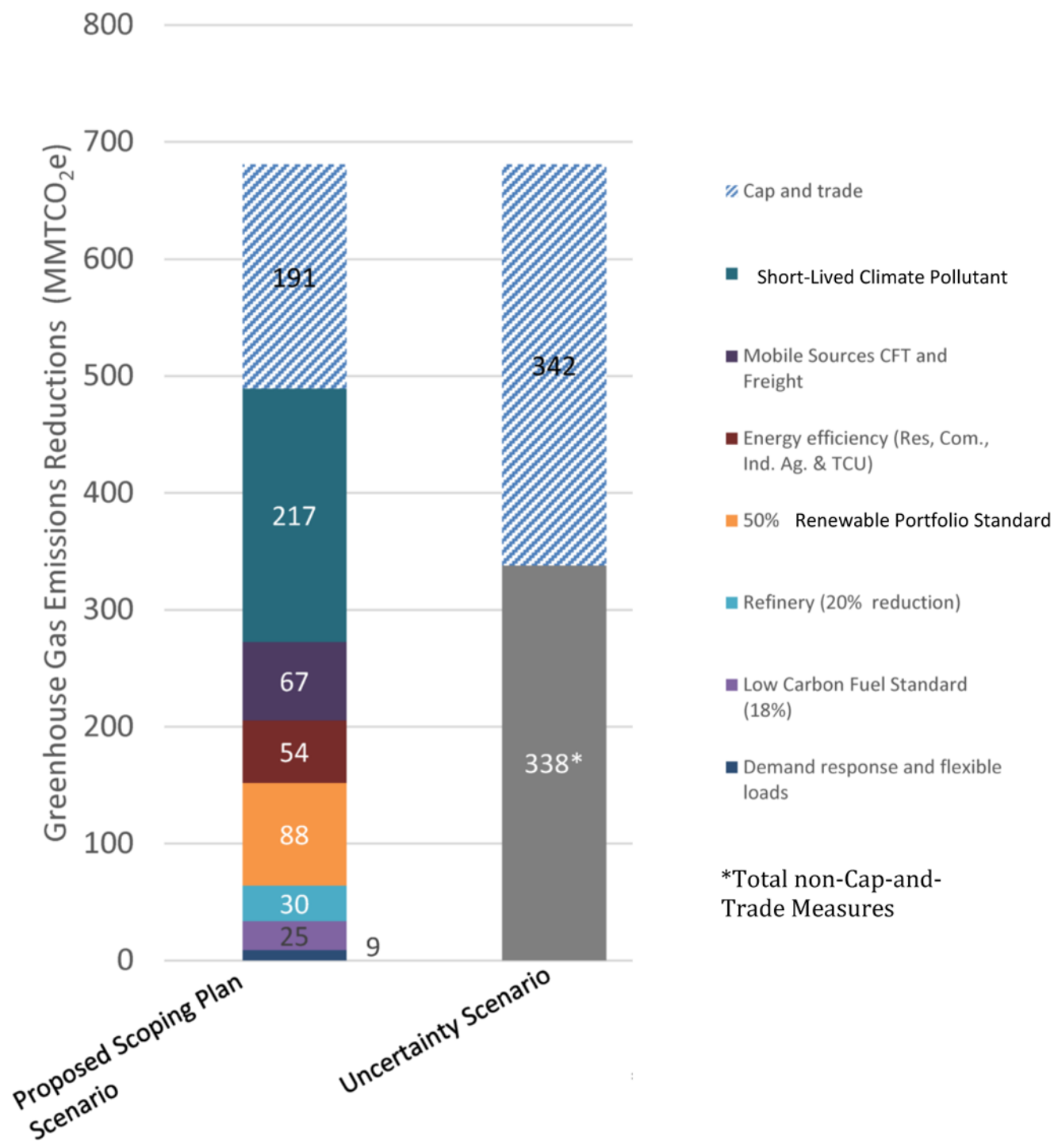
targets to double energy efficiency in buildings by 2030. In October 2017, the CEC issued their final report on a strategy to double energy efficiency by 2030. The report sets targets for utility providers and “nonutility” program savings. Nonutility program savings focus on energy efficiency savings from programs such as Building Efficiency Standards and Appliance Efficiency regulation. SB 350 requires large publicly owned utilities and all load-serving entities under the jurisdiction of the California Public Utilities Commission (CPUC) to file integrated resource plans (IRPs) with the California Energy Commission (CEC) and CPUC, respectively. IRPs must detail how each utility will meet their customers resource needs, reduce greenhouse gas emissions, and ramp up the deployment of clean energy resources in order to meet the 2030 target, pursuant to SB 350. The law also requires the California Public Utilities Commission (CPUC) to direct electric utilities to establish annual efficiency targets and implement demand-reduction measures to achieve this goal.

Senate Bill 32

In September 2016, the Governor signed Senate Bill 32 (SB 32) into legislation, which builds on AB 32 and requires the state to cut GHG emissions to 40 percent below 1990 levels by 2030. With SB 32, the Legislature also passed Assembly Bill 197, which provides additional direction for updating the Scoping Plan to meet the 2030 GHG reduction target codified in SB 32. CARB published California’s 2017 Climate Change Scoping Plan Update in November 2017 (2017 Scoping Plan). The 2017 Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target. Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State’s emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce “super pollutants” by reducing methane and hydrofluorocarbons by 40 percent.

As presented in the 2017 Scoping Plan, various changes and measures are needed to achieve the 2030 target. As shown in **Figure 8**, the Scoping Plan has established a proposed reduction scenario that requires specific reductions through programs and changes to fossil fuel consumption. Based on the Scoping Plan scenario, a significant portion of GHG emission reductions will result from statewide programs and existing and proposed policies, including Cap and Trade, a doubling of energy efficiency as required by SB 350, Renewable Portfolio Standard requirements, and Low Carbon Fuel standards. Other



2030 Greenhouse Gas Reduction Scenario

Figure

significant reductions will be achieved through an increase in zero-emission vehicles, trucks and buses (referred to in the Scoping Plan as Mobile Sources); improvements to freight efficiency, reductions in short-lived climate pollutants including black carbon, methane, and hydrofluorocarbons¹⁹; improvements in demand response and flexible loads by utility providers; and reductions in emissions from refineries.

City of Santa Clara General Plan

The Santa Clara 2010-2035 General Plan includes policies that address the reduction of GHG emissions during the planning horizon of the General Plan. Goals and policies that address sustainability (see General Plan Appendix 8.13: Sustainability Goals and Policies Matrix) are aimed at reducing Santa Clara's contribution to GHG emissions. As described below, the development of a comprehensive GHG emissions reduction strategy for Santa Clara is also included in the General Plan.²⁰

Climate Action Plan and Silicon Valley Power

Santa Clara adopted its comprehensive GHG emissions reduction strategy (CAP) in December 2013. The goal of the CAP is to achieve Santa Clara's fair share of statewide emissions reductions for the 2020 timeframe consistent with AB 32. The CAP specifies 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.).

A key CAP focus area that is being implemented is Coal-Free and Large Renewables. 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 Santa Clara; about 28 percent on average. Since nearly half (48 percent) of Santa Clara's GHG emissions result from electricity use, removing fossil fuel sources of electricity generation is critical for achieving Santa Clara's GHG reduction goals.²¹ This measure is being undertaken by SVP.

In December 2018, SVP published an updated Strategic Plan that outlines goals and actions for achieving 2030 GHG emission reductions consistent with the legislation described above. As described in the strategic plan, SVP currently provides 44 percent of its electricity from non-carbon renewable resources. All electricity from SVP has been coal-free since January 2018. Beginning in December 2018, SVP is

¹⁹ Black carbon is the sooty black material emitted from gas and diesel engines, coal-fired power plants, and other sources that burn fossil fuel. Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills. Hydrofluorocarbons (HFCs) are a group of industrial chemicals primarily used for cooling and refrigeration.

²⁰ City of Santa Clara. 2010. *2010-2035 General Plan*. Available: <http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan-and-specific-plans>. Accessed: August, 2018.

²¹ City of Santa Clara. 2013. *Climate Action Plan*. <http://santaclaraca.gov/home/showdocument?id=10170>. Accessed July, 2017.

undergoing a 6-month process to update its IRP to lay out needed steps to meet the 50 percent Renewable Portfolio Standard set by SB 32. SVP plans to exceed the 50 percent target.

The CAP also addresses data centers directly and sets benchmarks for power usage effectiveness (PUE). The CAP requires data centers with a rack power rating of 15 kW or higher to achieve a PUE rating of 1.2 or lower or to undertake a feasibility study to identify techniques that could achieve a PUE of 1.2. This approach ensures the largest projects are captured and required to analyze their power efficiency, a similar strategy to the state's Cap and Trade program. This approach also supports the 2017 Scoping Plan target of increasing energy savings from energy efficiency.

The City requires that CEQA clearance for all discretionary development proposals address the consistency of individual projects with reduction measures in City's CAP and goals and policies in the Santa Clara General Plan designed to reduce GHG emissions. Compliance with appropriate measures in the CAP would ensure an individual project's consistency with an adopted GHG reduction plan for 2020.

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant. With implementation of the project, GHG emissions would result from construction activities and data center operation. Construction emission would result from equipment exhaust. Operational emissions would be both direct and indirect. Direct operational emissions would result from emissions from project equipment such as the cooling towers and generators. Indirect emissions would result from electricity used to run the servers, electricity used for water and wastewater conveyance, and emissions from vehicles traveling to and from the site.

Construction

BAAQMD has not established a threshold for construction-period GHG emissions, therefore construction emissions are described in this section and compared to thresholds for air quality on an informational basis in order to provide context. As described in **Section 2.3, Air Quality**, construction-period emissions would be generally minor and would not exceed BAAQMD thresholds for localized air quality, including emission of NO_x and CO. Daily construction emissions of NO_x would be a maximum of 26 pounds per day (BAAQMD threshold for air quality impacts: 54 pounds per day), and there would be no notable sources of CO emissions. Total construction GHG emissions are estimated to be 589 metric tons of CO₂e. Amortized over the life of the project, which is assumed to be 30 years, this equates to 19.6 metric tons per year. Based on BAAQMD's guidelines and the project-specific information provided herein, GHG emissions during construction would be minor and temporary. Thus, GHG emissions from project construction are considered less than significant.

Operation

The project's primary function is to house computer servers, which require electricity 24 hours a day to operate. Therefore, operation of the data center would require a substantial amount of electrical power. The data center is anticipated to require an average of 22 MW to operate, which would

equate to 192,720 MW hours per year. This would constitute the project's largest GHG contribution through the indirect generation of GHG emissions. Overall, the daily power usage would vary depending on how many servers are up and running and how intensely the data center's clients are running their servers. In addition to indirect GHG emissions, the project would directly result in GHG emissions through operation of equipment, specifically diesel generators. Predicted direct and indirect GHG emissions resulting from project operation are shown in **Table 2-4**.

Indirect Operational Emissions

Electricity production can generate GHGs if fossil fuels (such as coal and natural gas) are the source fuel. In contrast, energy provided by renewable energy sources (such as wind power, solar, or hydroelectric) would have a reduced or nonexistent rate of GHG emissions.

Electricity for the project would be provided by SVP. In 2017, SVP emitted 423 pounds of CO₂ per MW of electricity provided.²² This represents the baseline condition for this analysis, as it is the most recent available data. However, as described above, SVP eliminated coal from its power mix at the end of 2017, replacing it with a mix of renewable energy sources.²³ This change is anticipated to reduce SVP's emission rate by approximately 18 percent to 348 pounds of CO₂ per MW by 2020, based on data provided by SVP in February 2019.

For the year 2020, the rate of 348 pounds of CO₂ per MW is considered conservative, because other CAP measures and measures required by statewide legislation would be in place to further reduce the rate in 2020 and beyond. Because the precise reduction in CO₂ by year 2020 cannot be accurately predicted, and it would therefore be speculative to establish a lower rate, the rate of 348 is used in this analysis to represent opening year conditions.

²² Hughes, Kathleen, Senior Electric Division Manager, SVP, February 6, 2019. Personal communication with Diana Fazely and Alexander Abbe. Email.

²³ Silicon Valley Power, 2018.

Table 2-4 Annual Project GHG Emissions

Source	Statewide Average Power Mix Emissions of CO ₂ e in metric tons (MT)	Project Annual Emissions of CO ₂ e in Metric Tons (MT) – Baseline Conditions (2017)	Project Annual Emissions of CO ₂ e in Metric Tons (MT) – Predicted Future Conditions (2020)	Project Annual Emissions of CO ₂ e in Metric Tons (MT) – Predicted Future Conditions (2030)
Annual Operational GHG Emissions				
Energy	52,106	37,420	30,864	19,587
Mobile	176	176	176	132 ^a
Waste	98	98	98	98
Water and Wastewater	<1	<1	<1	<1
Generator Testing	873	873	873	873
Total Operation Emissions	53,253	38,567	32,011	20,690
Notes	<i>Using computed statewide 2016 emission rate</i>	<i>Assumes SVP 2017 reported rate (423 lbs CO₂/MW)</i>	<i>Assumes SVP 2020 projected emission rate (348 lbs CO₂/MW)</i>	<i>Assumes SVP 2030 projected emission rate (219 lbs CO₂/MW)</i>

Source: Illingworth and Rodkin, 2019

^aLower vehicle emissions rates in 2030 are based on statewide programs and legislation to reduce automobile emissions by 2030.

Under baseline conditions (2017), the project would generate 38,567 lbs of CO₂ annually using SVP's power mix. With incorporation of SVP's planned renewable power mix in 2020, the project's annual emissions would decrease by approximately 17 percent from baseline conditions. By utilizing power generated with SVP's SB 32-consistent portfolio of renewable energy, the project's indirect GHG emissions would be consistent with SB 32 and the 2017 Scoping Plan scenario to achieve SB 32's goal of 40 percent below 1990 levels by 2030.²⁴ By comparison, the project's indirect GHG emissions from electricity under baseline conditions would be 28 percent below the 2016 statewide average rate of GHG emissions from electricity. Moreover, project emissions would be reduced by over 46 percent compared to baseline (2017) conditions by 2030.

²⁴ As a whole, the state of California is on track to reach 1990 levels of GHG emissions in 2020.

In addition, the project would indirectly result in a small amount of mobile emissions through vehicles traveling to and from the project site. As described in the 2017 Scoping Plan, mobile source emissions will continue to decrease over time as a result of existing and planned statewide programs, including the increase of electric/zero-emission vehicles and the Low Carbon Fuel Standard.

In addition to renewable power, the 2017 Scoping Plan scenario for meeting 2030 goals includes energy efficiency. The City's CAP addresses energy efficiency for data centers via a two-step process. First, the average rack power rating for a data center is determined; if it is below 15 kW, a feasibility study for PUE is not required. The project's rack power rating would be below 15 kW, therefore, a feasibility study for PUE is not required. However, as described in SVP's strategic plan, SVP works closely with industrial customers to develop project-specific energy efficiency rebate plans. This is carried out under SVP's obligation to implement SB 350.

Therefore, based on all of the above, the project's contribution to indirect operational GHG emissions would be less than significant.

Direct Operational GHG Emissions

During project operation, diesel generators would be periodically tested for maintenance purposes. The burning of diesel fuel results in emissions of black carbon, a known GHG addressed in the 2017 Scoping Plan. As discussed in the 2017 Scoping Plan, under Senate Bill 1383, man-made black carbon emissions must be reduced by 50 percent by 2030. The majority of black carbon emissions in the state result from forestry and land management activities and wildfires. As described in the Project Description above, the project would include EPA Tier II engines for all diesel generators, and generators would be outfitted with diesel particulate filters (DPFs). Generators would be fueled using ultra-low sulfur diesel fuel with a maximum sulfur content of 15 parts per million (ppm). These measures will greatly minimize black carbon emissions from the diesel generators, with a minimum control efficiency of 85 percent removal of particulate matter. While the precise percentage reduction in black carbon needed from diesel engines to meet SB 32 goals is not called out in the 2017 Scoping Plan, given that the majority of this category of emissions comes from forestry activities and other activities described above, a reduction of 85 percent of particulate emissions for generators is reasonably believed to meet or exceed the reduction goal. Therefore, the project's contribution to direct operational GHG emissions would be less than significant.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions?

Less than Significant. The project would not conflict with an applicable local plan, policy or regulation adopted for the purpose of reducing the emission of GHGs. Key planning and policy

documents in Santa Clara include the General Plan and CAP. The CAP was adopted in December of 2013 and included in the General Plan as an appendix item.²⁵

Applicable General Plan Policies

Santa Clara adopted the 2010-2035 General Plan to accommodate planned housing and employment growth through 2035. As part of Santa Clara's General Plan Update, new policies were adopted that address the reduction of GHG emissions during the planning horizon of the General Plan. The General Plan is organized chronologically into three phases. Phase II covers the time period from 2015 through 2023.

For the project, implementation of policies that call for increased energy efficiency or reduced energy use would effectively reduce indirect GHG emissions associated with energy generation as required in the General Plan. Consistency of the project with relevant General Plan policies is described in **Table 2-5**.

The General Plan also includes a number of policies that call for or encourage the use of Transportation Demand Measures (TDM) and other programs to reduce emissions associated with vehicle travel. As discussed in more detail in **Section 2.16, Transportation and Traffic**, the project would generate very few vehicle trips to the project site. Since GHG emissions from mobile sources would be relatively low for this project, the evaluation of consistency with transportation policies is not addressed further.

As shown in **Table 2-5** and described above, the project would not conflict with general plan policies adopted for the purpose of reducing the emissions of GHGs. Thus, this impact is less than significant. No mitigation is required.

²⁵ The current CAP has a horizon year of 2020. Because the project is not anticipated to be finished until after 2020, consistency with policies established in the CAP would not be sufficient to make less-than-significant determination. Consistency with the current CAP is included for informational purposes only.

Table 2-5 Project Consistency with General Plan Sustainability Policies

Emission Reduction Policy	Project Consistency
General Land Use Policies	
5.3.1-P11 Encourage new developments proposed within a reasonable distance of an existing or proposed recycled water distribution system to utilize recycled water for landscape irrigation, industrial processes, cooling and other appropriate uses to reduce water use consistent with the CAP.	Consistent. The project would be located within a reasonable distance of the existing recycled water line that runs along Walsh Avenue. This recycled water line would be used to irrigate landscaping.
Air Quality Policies	
5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.	Consistent. Project construction measures would reduce GHG emissions during the construction period. Operation of the project would be energy-efficient by design, utilizing a cooling system that allows passive cooling and reduces electrical consumption. The new substation that would serve the project site would be designed and operated according to all SVP requirements and regulations, including those that have been implemented in service of this emissions target.
Energy Policies	
5.10.3-P4 Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.	Consistent. The project design would be consistent with all required green building standards, consistent with current Title 24 of the California Building Code and local green building regulation. The project does not include solar panels or other on-site power generation.
5.10.3-P5 Reduce energy consumption through sustainable construction practices, materials and recycling.	Consistent. The project would divert at least 75 percent of construction waste and use high-recycled content material where feasible.

Emission Reduction Policy	Project Consistency
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.	Consistent. The project would divert at least 75 percent of construction waste and use high-recycled content material where feasible. To promote water-efficiency, the project would install drought-tolerant plants to minimize water use and water efficient landscaping would be provided. Low-flow plumbing fixtures would be installed in the building.
Water Policies	
5.10.4-P6 Maximize the use of recycled water for construction, maintenance, irrigation and other appropriate applications.	Consistent. Drought tolerant landscaping would be planted and irrigated with recycled water from the existing recycled water line that runs along Walsh Avenue.
5.10.4-P7 Require installation of native and low-water- consumption plant species when landscaping new development and public spaces to reduce water usage.	Consistent. The project would include installation of drought-tolerant plants to minimize water use and water-efficient landscaping would be provided.

Source: Circlepoint, 2018

Climate Action Plan Consistency²⁶

Santa Clara adopted its current climate action plan (CAP) in December 2013. This plan outlines strategies to reduce GHG emissions for a horizon year of 2020. However, the plan does not address meeting the requirements of SB32 (2030 emissions target). 2030 emissions targets are discussed under **question “a”** above.

Santa Clara’s CAP recommends a citywide GHG reduction target of 15 percent below the 2008 baseline level by 2020. Data centers in Santa Clara are indirect sources of GHG through electricity use. Increasing energy efficiency with these facilities is a measure to reduce GHG emissions. The CAP identifies measures to close the local emissions reduction gap and achieve an emissions reduction target consistent with AB 32. This approach is divided into several focus areas, four of which are relevant for the project:

Focus Area 1: Coal-Free and Large Renewables

Goal: Eliminate coal from SVP’s portfolio and increase use of natural gas and renewable energy.

As described above, reducing the rate of emissions associated with electricity production is a critical measure in the CAP. SVP’s switching to renewable energy sources as an alternative to fossil fuels has reduced SVP’s emissions substantially, and continued migration to renewable

²⁶ Santa Clara’s CAP has a horizon year of 2020. Because the project would not be completed until after 2020, this discussion is provided for informational purposes only; compliance with this plan does not apply to the CEQA determination made at the end of this section.

energy will further reduce GHG emissions from electricity generation in the future. Because data centers consume high rates of electricity, reducing emissions from electricity production indirectly reduces the GHG emissions from these types of projects. The project's electricity would be provided by SVP, making the project's operation consistent with this CAP goal.

Focus Area 2: Energy Efficiency Programs

Goal: Maximize the efficient use of energy throughout the community

The CAP identifies energy efficiency as a means to reducing GHG emissions from data center projects, such as the project. According to the CAP, 28 percent of total electricity consumed in Santa Clara is used by data centers. To respond to the effects of this electricity use, Santa Clara requires new data centers with an average rack power rating of 15 kW or more to complete a feasibility study identifying techniques to achieve a PUE rating of 1.2 or lower.

Based on project design details provided by the applicant, the average rack power rating for the data center would be less than 15 kW. Therefore, a PUE study is not required and the project would be consistent with this CAP goal.

Focus Area 4: Waste Reduction

Goal: Increase recycling opportunities for all disposed materials

Measure 4.2: Increased Waste Diversion. The CAP sets a goal to increase solid waste diversion to 80 percent through increased recycling efforts, curbside food waste pickup, and construction and demolition waste programs. The project would be required to participate in Santa Clara's Construction and Demolition Debris Recycling Program by recycling or diverting at least 50 percent of waste materials generated.

Focus Area 5: Off-Road Equipment

Goal: Ensure efficient operations of off-road equipment

Measure 5.2: Alternative construction fuels. This CAP measure requires construction projects to comply with BAAQMD best management practices, including alternative-fueled vehicles and equipment. As a condition of approval, project construction would follow BAAQMD basic construction measures including limiting idling times to 5 minutes or less and limiting vehicle speeds to 15 miles per hour or less.

Therefore, based on the above, the project would be consistent with the City's CAP, and would not conflict with a plan or policies developed to reduce GHG emissions. The project's consistency with the goals of SB 32 and the 2017 Scoping Plan is addressed under **question "a"**. This impact would be less than significant.

2.8 Hazards and Hazardous Materials

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The project site is located in an industrial and commercial area. Surrounding land uses consist of commercial and industrial operations, including a U.S. Post Office, wholesale retailers, and a rental car agency. Phase I and Phase II environmental site assessments (ESA) were completed for the project site in September of 2017.

Currently vacant, an automobile service company located in the rear warehouse was the most recent tenant on the project site and used outdoor areas near the warehouses for storage of vehicles, auto parts, and miscellaneous supplies. The remaining two buildings on the project site—the street-facing office building and the other metal warehouse—are also vacant. The building facing Walsh Avenue was constructed in 1952 as office space, with a warehouse addition added in 1962. Two other steel warehouse buildings were subsequently constructed between 1962 and 1974. Prior to 1961, the site was used by Currie Manufacturing facility. According to the site owner, machinery operated by the Currie Manufacturing facility was electrical and limited to pallet manufacturing and bulk loading. Subsequent tenants included automobile and appliance repair services.

All buildings were constructed on concrete slab with metal roof, later coated with a foam resurfacing treatment. The project site does not include a permanent drainage system. A pump lift system was installed to transfer sewage from the occupied warehouse building towards Walsh Avenue and the Santa Clara sewer system.

The project site is approximately 1 mile west of San Jose International Airport, outside of the airport's noise impact area but within the Airport Influence Area as defined by the Airport Land Use Commission (ALUC). The project would not require referral to ALUC and would not require an aviation easement to the City of San Jose. However, it would require submittal to the FAA for a Determination of No Hazard.²⁷

Hazardous Materials Use and Storage

Within Santa Clara, a number of local, state, and federal regulations govern the use, transport, and storage of hazardous materials. A Hazardous Materials Business Plan is generally required of any facility which generates any quantity of hazardous waste or which handles hazardous materials in amounts greater than 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases. The implementation and enforcement of these local, and state and federal regulations regarding the use, storage and transport of hazardous materials (including setbacks for flammable storage from property lines) reduce the potential for impacts to off-site land uses, in the event of an accidental release.

Potential Off-Site Sources of Contamination

The Phase I ESA (**Appendix E**) included a search of federal, state, and local environmental databases for potential contamination sources on properties within 1 mile of the project site. This search revealed two recognized environmental conditions (RECs) within 1 mile of the project site:

²⁷ Fernandez, Debby. 2018b. City of Santa Clara. Written communication with Brianna Bohonok.

- On-site groundwater contamination from a leaking underground storage tank (LUST) located on the adjacent T&D Tile property to the west side of the project site.
- Four properties within a 0.25-mile radius of the project site have documented groundwater and/or soil vapor impacts with volatile organic compounds (VOCs), including two upgradient properties (former Santa Clara Circuits and Amdahl). While the upgradient source has not been identified, a potential exists for the same source to have migrated beneath the project site and cause a REC.

Potential On-Site Sources of Contamination

Former Uses

Historical use of the project site prior to the development with industrial uses appears to be agricultural from the late 1930's to around 1952. Due to this agricultural history, it is likely agricultural chemicals, such as pesticides, herbicides, and fertilizers, were used on the site. Subsequent industrial uses may have also led to soil contamination. To determine the presence or absence of such contaminants, a Phase II ESA was completed. Laboratory analyses of shallow soil samples did not detect concentrations of arsenic, lead, or other soil contaminants above typical natural background levels.

Volatile Organic Compounds (VOCs)

Soil vapor analyses detected the following VOCs in at least one of the four boring samples taken: ethanol, Freon-113, Freon-11, 2-propanol, hexane, cyclohexane, and tetrahydrofuran. However, none of the detected VOCs were present in concentrations exceeding their respective Tier 1 residential or Tier 2 commercial/industrial environmental screening levels for soil vapor.

Asbestos and Lead-Based Paint

Since the existing buildings were constructed prior to 1978, building materials containing asbestos and lead-based paint may be present. However, asbestos-containing building materials and lead-containing paint were not assessed in either the Phase I or Phase II ESAs.

a) Would the project create a significant hazard to the environment or to the public through the routine transport, use, or disposal of hazardous materials?

Less than Significant. The project would involve the use of potentially hazardous materials such as cleaners, pesticides for landscaping, and diesel fuel for backup generators. Up to 67,000 gallons of diesel fuel would be stored on the project site in at-grade storage tanks that would be located underneath each backup generator. Truck trips to deliver diesel fuel and other hazardous materials are expected to reach the project site via US-101, San Tomas Expressway, Scott Boulevard, Central Expressway, Walsh Avenue, and possibly other local streets which connect the project site to US-101 and San Tomas Expressway. The above ground fuel storage tanks would be subject to all requirements set forth in Chapter 6.67 of the California Health and Safety Code (§ 25270 – 25270.13). All potentially hazardous materials used on the project site would be contained, stored,

and used in accordance with manufacturer's instructions and handled in compliance with applicable standards and regulations. In accordance with federal and state law, the project would be required to disclose hazardous materials handled at reportable amounts. Additionally, the project applicant would be required to prepare an emergency response and evacuation plan, conduct hazardous materials training (including remediation of accidental releases, including diesel fuel), and notify employees who work in the vicinity of hazardous materials, in accordance with federal Occupational Health and Safety Administration (OSHA) and California Division of Occupational Safety and Health (Cal OSHA) requirements. For transport and handling of fuel, Cal OSHA requirements include establishment of an Injury and Illness Prevention Program (CCR Title 8 § 6760) and also specify design requirements for underground fuel storage tanks (CCR Title 8 § 6807).

As the Certified Unified Program Agency for Santa Clara, the Santa Clara Fire Department Hazardous Materials Division (Hazardous Materials Division) is authorized to implement the California Aboveground Petroleum Storage Act (Act). The Hazardous Materials Division inspects facilities that store petroleum products in aboveground tanks for compliance with the Act and applicable sections of the federal Spill Prevention, Control, and Countermeasure (SPCC) rule. Installation of above ground tanks on the project site would be subject to this inspection and project operation would comply with all relevant regulations.

The Hazardous Materials Division also administers the California Accidental Release Prevention Program within Santa Clara. The program requires assessment of hazard potential from the storage of hazardous materials on-site and the implementation of a Risk Management Plan to minimize the risk of accidental release. The fuel storage tanks would pose a risk to soils if an accidental release of fuel occurred. A Risk Management Plan would be required for the project to ensure the storage tanks are maintained and operated in a way that minimizes the risk of release. In the event of an accidental release, the Hazardous Materials Division would oversee required cleanup and remediation as required by local, state and federal regulation.

With implementation of the required permit conditions and regulatory controls outlined above, impacts related to the routine use, transport, or disposal of hazardous materials would be less than significant. No mitigation is required.

- b) **Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Less than Significant with Mitigation. Construction activities would require building foundation work, including grading and excavation. Although the project site was previously used for agricultural and industrial purposes, soil analysis did not detect concentrations of hazardous chemicals. Although the Phase I ESA called out groundwater contamination from an adjacent LUST site as a REC, contamination levels reported in soil, grab-groundwater, and soil vapor samples collected for the Phase II ESA were less than applicable Tier I environmental screening levels (see **Appendix E**). Therefore, contamination on site would not represent a potential threat to human health for future project use and the potential for exposure to shallow contaminated soil, groundwater, or vapor intrusion to indoor air would be low.

Because the existing buildings were constructed prior to 1978, building materials containing asbestos and lead-based paint may be present and demolition activities could release hazardous materials into the environment. Therefore, **Mitigation Measure HAZ-1** would be required to ensure that hazardous materials would not present a threat to human health or the environment.

Mitigation Measure HAZ-1: A survey by a certified asbestos consultant (CAC) to assess asbestos, lead-containing paint, and other potentially hazardous waste will be conducted prior to demolition activities. Disposal of any hazardous materials found during this survey will be coordinated with the Mission Trail Waste System.

With implementation of **Mitigation Measure HAZ-1**, this impact would be less than significant.

- c) **Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter-mile of an existing or proposed school?**

No Impact. The closest school to the project site is Granada Islamic School, which is approximately 0.60 miles north of the project site. Because the project site is not located within a 0.25-mile radius of a school, it would not emit any hazardous emissions to educational establishments. No impact would occur.

- d) **Would the project 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, would it create a significant hazard to the public or the environment?**

Less than Significant. A search of the Department of Toxic Substances Control EnviroStor data base along with a search of the San Francisco Bay Regional Water Quality Control Board (RWQCB) GeoTracker database show there are no known hazardous materials or spills on the project site. As described above, water sampling from the site indicates off-site contamination has historically impacted groundwater on site, however, recent sampling has shown contaminant levels in groundwater to be at acceptable levels. Soil sampling determined the concentration of hazardous contaminants from prior agricultural and industrial uses fall below levels for human concern and do

not warrant mitigation. Therefore, this impact would be less than significant. No mitigation is required.

- e) **For a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

Less than significant. The project site is located approximately 1 mile west of San Jose International Airport. The project site is within the San Jose Airport's Airport Influence Area (AIA) in the Traffic Pattern Zone (TPZ). The TPZ is that portion of the airport area routinely overflowed by aircraft operating in the established airport traffic pattern. The potential for aircraft accidents is relatively low and the need for land use restrictions is minimal. No sports stadiums or similar uses with very high concentrations of people (greater than 20,000-person capacity) are permitted. The project would not conflict with this policy.

According to FAA regulations, the obstruction surface—or the height at which an object may present an obstruction to aircraft flight—at the project site begins at approximately 165 feet above ground. Because the project would be approximately 67 feet in height, any hazard to planes taking off from or landing at the airport would be negligible.²⁸

FAA regulations require that any proposed structure of more than 35-40 feet in height above ground be submitted to the FAA for airspace review. Because the data center would be approximately 67 feet in height, a no-hazard determination from the FAA would be required prior to development. The project would comply with all hazard-reducing conditions contained in the no-hazard determination as a condition of occupancy certification. Therefore, with adherence to existing regulation, impacts to airport safety would be less than significant. No mitigation is required.

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

No Impact. The project is not located in the vicinity of a private airstrip.²⁹ Therefore, no impact would occur.

- g) **Would the project impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Less than Significant. Santa Clara adopted the Santa Clara City Emergency Operations Plan (EOP) in 2016 to assign responsibilities to designated city leaders, employees, departments, agencies, boards, and community and volunteer organizations in the event of a disaster. Santa Clara Fire Department (SCFD) currently serves the project site. Please refer to **Section 2.14, Public Services**, for more detailed information regarding fire and emergency services. The project does not include any changes to the existing public roadways that provide emergency access to the site or surrounding area. Operation of the project would require a maximum of 40 employees to be on-site

²⁸ Fernandez, Debby. 2018a. City of Santa Clara. Personal communication with Brianna Bohonok.

²⁹ Google Earth. 2018.

over a 24-hour period (30 daytime employees and 10 nighttime employees); however, this increase is not expected to result in a significant increase in demand for emergency access. Therefore, the project would not impair the implementation of, or physically interfere with the City's Emergency Operations Plan, adopted in 2016. Impacts would be less than significant and no mitigation is required.

h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildland fires are adjacent to urbanized areas or where residents are intermixed with wildlands?

No Impact. The project site is located in a developed urban area contains no wildland areas. Neighboring cities such as Sunnyvale, San Jose, and Cupertino adjacent to the Santa Clara City limits are also fully developed. The project site is not located adjacent to natural areas that would be subject to wildland fires. Therefore, the project would not result in any significant exposure of people or structures to wildland fires. No mitigation is required.

2.9 Hydrology and Water Quality

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would 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 would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage patterns of the site or area including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted run-off?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Water Supply

Santa Clara operates 26 wells that tap underground aquifers and make up about 62 percent of Santa Clara's potable water supply. A water recharge program is administered by Valley Water from local reservoirs, and imported water enhances the dependability of the underground aquifer. The remainder of Santa Clara's water supply consists of water imported from two wholesale water agencies. For certain non-potable uses, recycled water from the San Jose/Santa Clara Regional Wastewater Facility is used. This is highly treated water delivered through separate pipelines. This source makes up about 16 percent of water sales in Santa Clara. Recycled water offsets the use of potable sources in drought-prone California and is a reliable source for irrigation for conservation of potable sources.³⁰

Valley Water approved and adopted an updated Urban Water Management Plan (UWMP) in 2015. Similarly, Santa Clara updated its UWMP in 2015 (the plan was adopted in November 2016). Santa Clara's 2015 UWMP did not specifically include this project; however, the UWMP did include projected increases in water demand due to densification and intensification of both residential and non-residential land uses.

Stormwater

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 US EPA and the State Water Resources Control Board have been developed to fulfill the requirements of this legislation. US EPA's regulations include the NPDES permit program, which controls sources that discharge pollutants into waters of the US (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.

³⁰ City of Santa Clara Water & Sewer Utility. Available: <http://santaclaraca.gov/government/departments/water-sewer-utilities/recycled-water-utility>. Accessed: July, 2018.

The RWQCB has issued a Municipal Regional Stormwater NPDES Permit (Permit Number CAS612008) (MRP). The regional permit applies to 77 Bay Area municipalities, including Santa Clara. Under provisions of the NPDES Municipal Permit, redevelopment projects that disturb more than 10,000 square feet are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. Post-construction runoff must be treated by using Low Impact Development (LID) treatment controls, such as biotreatment facilities.

In addition to water quality controls, the Municipal Regional Stormwater NPDES permit requires all projects that create or replace 1 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 Santa Clara Hydromodification Management Applicability Map). Catchments that receive storm runoff from the site drain to a hardened channel, and the project is infill in an area that is 65 percent or more impervious. Therefore, the project site is not subject to the hydromodification requirements of the Municipal NPDES permit.

Groundwater

Depth to groundwater is between 12 to 13 feet below ground surface at the project site, as identified in the site-specific geotechnical report completed in 2017 and included as **Appendix D**. Historic high groundwater levels in the immediate site vicinity are approximately 8 to 9 feet below existing grade. Fluctuations in groundwater levels are common due to seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

Tsunamis and Seiches

Seismically-induced ocean 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. Seiches are possible at reservoir, lake or pond sites.

a) Would the project violate any water quality standards or waste discharge requirements?

Less than Significant. In its current state, the project site consists of mostly impervious surfaces and some landscaped perimeter areas. Implementation of the project would create more than 10,000 square feet of impervious surface (data center and parking lot). Therefore, the project would be subject to the requirements of Provision C.3 of the Municipal Regional NPDES permit and would be required to comply with Santa Clara's Best Management Practices (BMP's) for erosion and sedimentation control during construction, as outlined in the Municipal Regional NPDES permit.

As more than 1-acre of impervious surface would be disturbed during construction, the project would be subject to a State NPDES General Construction Permit which would require submittal of a Notice of Intent to the State Water Resources Control Board. Additionally, the project would be subject to a post-construction NPDES Permit and Provision C.3 requirements, requiring incorporation of source control design elements to keep pollutants away from stormwater. Maintenance agreements, such as parking lot sweeping and catch basin cleaning, as well as storm drain signs and stenciling would be required by NPDES permit conditions.

Consistent with Santa Clara's LID requirements, the project would also include bioretention areas in landscaping design to ensure that particulates are removed from stormwater prior to discharge into a storm drain or creek. Compliance with the standard control measures outlined in the NPDES permit would ensure that impacts to water quality or waste discharge are less than significant during project operation.

Compliance with the control measures outlined in the State NPDES General Construction Permit would further ensure that impacts to water quality or waste discharge are less than significant. No mitigation is required.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would 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 would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant. The estimated water demand for the project would be 173,752 gallons (0.53 acre-feet) annually. This is less than the amount of water required by a 500 dwelling unit development (67.8 acre-feet annually) and does not require preparation of a Water Supply Assessment (WSA).³¹ Groundwater would not be extracted from the site via wells; Santa Clara would provide potable water services to the project through existing infrastructure. The UWMP identifies groundwater as a source of water supply for the project area and includes projected increases in water demand due to densification and intensification of non-residential land uses. Santa Clara's municipal water system currently has the capacity to provide up to 28.8 million gallons of water per day.³²

Valley Water tracks water supply, demand, and groundwater recharge on a monthly basis. As of July 2018, total groundwater storage was predicted to fall within normal levels established in the Santa Clara County Water District's Water Shortage Contingency Plan.³³ The Water District's projections are based on estimates generated from land use designations across the service area. The project

³¹ Fernandez, Debby. 2018a. City of Santa Clara. Personal communication with Brianna Bohonok.

³² City of Santa Clara Water & Sewer Utility. Available: <http://santaclaraca.gov/government/departments/water-sewer-utilities/recycled-water-utility>. Accessed: July, 2018.

³³ Valley Water. 2018. *Groundwater Condition Report, Santa Clara County*. Available: https://www.valleywater.org/sites/default/files/2018-07/Final_July_2018_Report.pdf. Accessed: July, 2018.

would introduce a new use to the site, and this use is permitted under the site's existing zoning and land use designation. Thus, the additional demand that would be placed on groundwater supplies by operation of the data center was reasonably anticipated in the broader demand calculations developed by Valley Water, and Santa Clara would have sufficient water supply to service the project. The project would not directly interfere with groundwater recharge, such as through the addition of significant amounts of new impervious surface or through the use of wells. Therefore, impacts to groundwater recharge or depletion from water use would be less than significant. No mitigation is required.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less than Significant. The project site is located within the San Francisco Bay Watershed. Natural drainage features within this watershed include the Calabazas Creek, Saratoga Creek, and San Tomas Aquino Creek. No streams, rivers, or other watercourses are located near the site, nor would they be directly altered by the project. The project would alter the drainage of the site, and a drainage plan has been prepared and would be implemented in the project. As project construction would involve ground disturbing activities, the project would be subject to the Municipal Regional NPDES Permit. This permit would require all post-construction runoff to be treated using LID treatment controls, such as biotreatment facilities. With implementation of the following BMPs required by Santa Clara, the project would not contribute substantial amounts of sediment to storm drain systems, and impacts resulting from erosion.

- Prior to construction, the applicant shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to Santa Clara, delineating efforts to control the discharge of stormwater pollutants. The SWPPP shall include control measures during the construction period for:
 - Soil Stabilization practices,
 - Sediment control practices,
 - Sediment tracking control practices,
 - Wind erosion control practices, and
 - Non-storm water management and waste management and disposal control practices.

As such, the project would not contribute substantial amounts of sediment to storm drain systems, and impacts resulting from erosion or siltation during construction would be less than significant. No mitigation is required.

- d) **Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

Less than Significant. As previously discussed, the project site is currently developed, predominantly with impervious surfaces. With implementation of the project, new on-site stormwater management would be incorporated and would increase the site's capacity for stormwater retention. Through Santa Clara's design review process and standard conditions of approval, the applicant would be required to develop an acceptable on-site stormwater management plan. With adherence to this plan, stormwater volumes from the site would not be increased over existing conditions. Therefore, the project would not significantly contribute to flooding and would result in a less-than-significant impact. No mitigation is required.

- e) **Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?**

Less than Significant. See response to **question "d"**. Once operational, the amount of surface runoff generated by the project would not increase compared to existing conditions, in compliance with the NPDES permit and City regulations. For this reason, the project would not contribute stormwater runoff which would exceed the capacity of the existing or planned stormwater drainage system, nor substantially degrade water quality. Therefore, the impact would be less than significant and would not require mitigation. No mitigation is required.

- f) **Would the project otherwise substantially degrade water quality?**

Less than Significant. See response to **question "a"** above. No mitigation is required.

- g) **Would the project 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?**

No Impact. According to the Flood Insurance Rate Map (FIRM) generated by the Federal Emergency Management Agency (FEMA), only the northernmost area of the project site is located within a 100-year flood zone (**Figure 9**). No housing would be placed within this flood zone, as the project does not involve the construction of new housing. Therefore, no impact would occur.

- h) **Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

Less than Significant. According to the FIRM generated by the FEMA, the majority of the project site is not located within a 100-year flood zone (**Figure 9**). However, the northernmost portion of the project site would be within a Flood Zone AH, as defined by FEMA, Zone AH represents areas subject to inundation by 1-percent-annual-chance (i.e. 100-year) shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet (FEMA 2018). This area of the project would feature a pedestrian sidewalk and landscaping similar to the existing conditions. Such improvements would not have the potential to impede or redirect flood flows. Therefore, the impact would be less than significant. No mitigation is required.

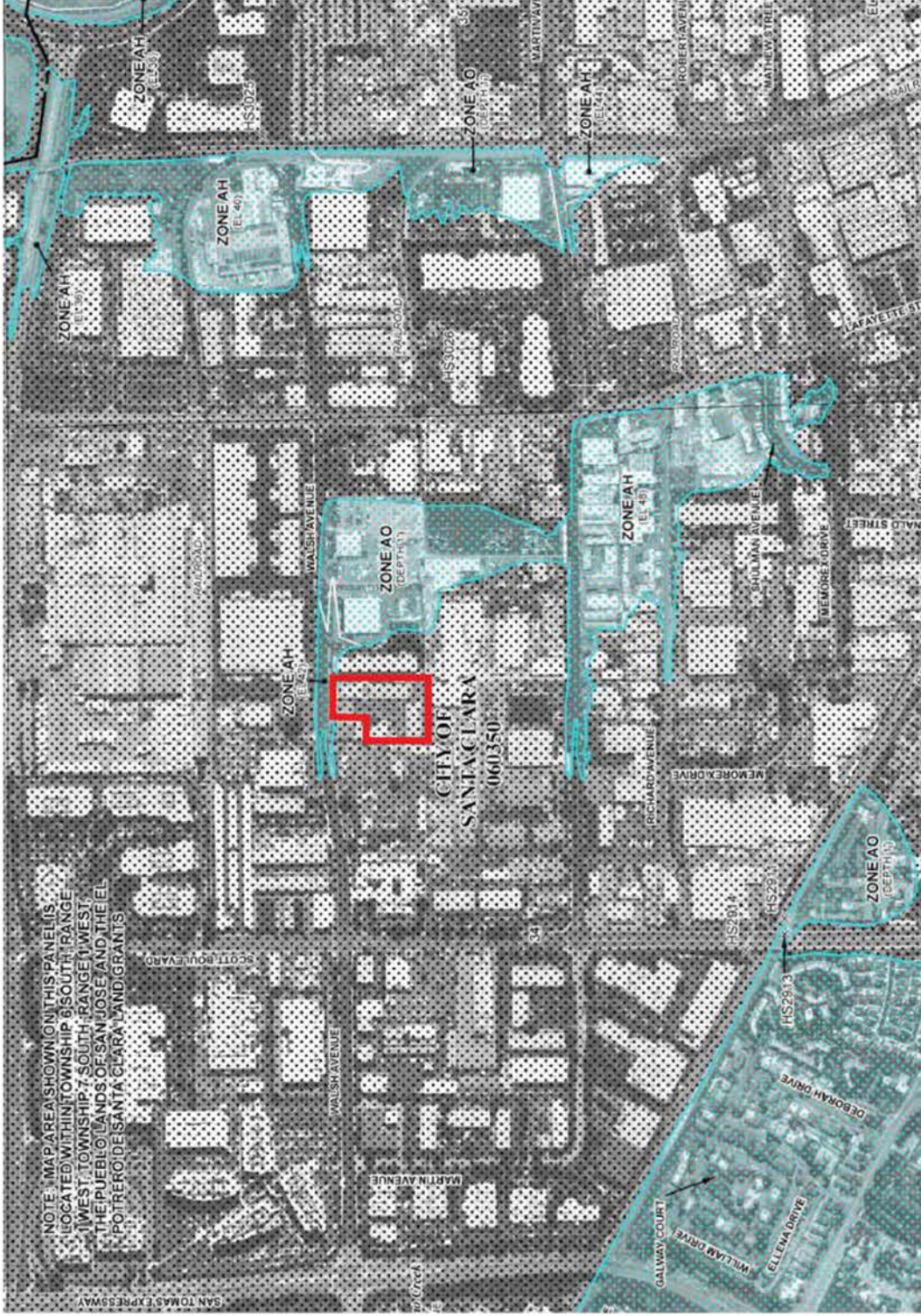
i) **Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

No Impact. There are no large bodies of water, dams, or levee systems in the project vicinity. The nearest dam is at the Anderson Reservoir. To aid downstream agencies and as required by state law, Valley Water has developed inundation maps that estimate what areas could be flooded in the unlikely event of an uncontrolled release of water from the Anderson Reservoir. According to the dam inundation maps, the project site is not located within inundation limits.³⁴ As such, the project would not expose people or structures to significant risks due to the failure of a dam, and no impact would occur.

j) **Would the project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?**

Less than Significant. The project site is located approximately 20 miles from the Pacific Ocean and approximately 2 miles from San Francisco Bay; due to this distance, potential impacts related to a tsunami are minimal. Additionally, the project site is not susceptible to impacts resulting from seiche because of its distance from any large bodies of water. The relatively flat topography of the project site and its immediate surroundings reduces the likelihood of mudflows to a minimal level. Therefore, the impact would be less than significant and no mitigation is required.

³⁴ Valley Water. 2016. *Anderson Dam Inundation Maps*.



Flood Hazard Zones

Figure

2.10 Land Use and Planning

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The project site is in the central part of Santa Clara, just south of US-101 and east of the San Tomas Expressway. Land use designations surrounding the project site consist of light industrial, public/quasi-public, and low intensity office/research and development uses. The project site is zoned Heavy Industrial (MH). There are no residential uses in the immediate vicinity of the project site. Surrounding development consists of one- to two-story office and industrial buildings to the north, east, and west with associated surface parking lots.

Sal's Airport and Limousine service occupies the lot immediately west of the project site while Sunlight Concepts (a solar lighting fixture dealership) and XL Vehicle Graphics and Digital Prints (a custom signage business) occupy the office building located immediately east of the project site. D&T Foods, a wholesale food distributor, is located to the south of the project site. A US Post Office is located north of the project site, across Walsh Avenue.

a) Would the project physically divide an established community?

No Impact. The project would not physically divide an established community. The project site is located in a developed area of commercial, industrial, public/quasi-public, and low intensity office/research and development uses. The project is consistent with the pattern of surrounding land uses.

Project improvements would generally be confined to an existing parcel that is accessible from public streets. Some off-site utility trenching would be required to connect the data center and substation to SVP power and to upgrade a portion of the municipal water line in front of the building. Such trenching is anticipated to occur either in existing public right-of-way or utility easements, or in areas that have been previously disturbed for urban development. The utilities would be placed underground, with no permanent changes occurring at the surface; trenching would occur prior to installation of the electrical lines and water line, and then the trench would be filled and repaved. Therefore, the project would not physically divide an established community, and no impact would occur.

b) Would the project 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?

No Impact. The General Plan land use designation for the project site is heavy industrial. This classification is intended to accommodate a range of heavy industrial uses, including manufacturing, processing, assembling, storage, and wholesale uses. Data centers are a permitted use in the heavy industrial land use designation.

The project site zoning is also heavy industrial. Under the zoning ordinance, this district is intended to encourage heavy industrial development in Santa Clara by providing and protecting an environment exclusively for such development, subject to regulations necessary to ensure the purity of the air and the waters in the Bay Area, and the protection of nearby uses of the land from hazards, noise, or other radiated disturbances. The permissible uses include (but are not limited to) manufacturing, processing, assembling, research, wholesale, storage use, railroad yards, freight stations, public utility, and public service uses. Santa Clara has approved data centers as a use consistent with the MH and Light Industrial (ML) zoning designations.

The project would have a floor area ratio (FAR) of 1.1, which would exceed the maximum FAR allowed under the MH designation: 0.45. However, such exceedances are commonly approved for data centers because FAR limits are established to limit vehicle trip generation, and data centers tend to generate relatively few trips. The project would generate approximately 156 total daily trips, which would be consistent with the MH designation.³⁵ Therefore, exceedance of the maximum FAR would not result in a land use or zoning conflict.

Therefore, the project would be consistent with the land use and zoning of the project site, and no impact would occur.

³⁵ Refer to Section 2.16, Transportation and Traffic for further discussion of trip generation.

c) **Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?**

No Impact. The project site is not subject to any adopted habitat conservation plans or natural community conservation plans as discussed in **Section 2.4, Biological Resources**. Therefore, no impact would occur.

2.11 Mineral Resources

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The General Plan states that there are no significant mineral resources located within Santa Clara.

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. There are no significant mineral resources located within Santa Clara. Therefore, the project would not have an impact to mineral resources that would be of value to the region or residents of the state. No impact would occur.

b) Would the project 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?

No Impact. As noted above, there are no significant mineral resources located within Santa Clara. Therefore, the project would not have an impact to mineral resources that would be of value to the region or residents of the state. No impact would occur.

2.12 Noise

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a) Result in 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Information in this section was drawn from a site-specific noise and vibration study prepared in July, 2018. The report is included in its entirety as **Appendix F** to this Initial Study. Subsequent to preparation of the noise study, more detailed information about specific backup generator selections became available. To ensure that the noise study captured the worst-case scenario, a memorandum was prepared comparing the refined backup generator specifications against those used in the noise study. This comparison confirmed that the results of the noise study remain accurate. This memorandum is also included in **Appendix F**.

Noise is typically described as any unwanted or objectionable sound and is technically described in terms of the loudness of the sound (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). However, because the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA), which gives greater weight to the frequencies of sound to which the human ear is most sensitive, was devised to relate noise to human sensitivity.

The dBA measurement system is not an effective way to measure noise levels within a community, since community noise is always fluctuating and changing. Therefore, other methods of describing noise levels have been developed, the most common of which are the Community Noise Equivalent Level (CNEL) and the Day-Night Noise Level (L_{dn}). CNEL is an average of all noise levels recorded over a 24-hour period. L_{dn} is an average that is similar to CNEL, but it also includes a 10-dB penalty for nighttime noise that occurs between 10:00 p.m. and 7:00 a.m.

Applicable Noise Standards

Santa Clara's General Plan identifies noise and land use compatibility standards for various land uses in the City. The noise standard is 70 CNEL for industrial land uses and 55 dBA CNEL for residential land uses. Noise levels exceeding 70 dBA CNEL are considered incompatible with residential land uses.

Table 2-6 General Plan Noise Standards

Land Use Category	Exterior Noise Exposure CNEL (dB)					
	55-60	60-65	65-70	70-75	75-80	80-85
Residential	*	**	***	****	****	****
Office Buildings, Business Commercial and Professional, Retail	*	*	**	***	****	****
Industrial, manufacturing, utilities, agriculture	*	*	*	***	***	****
* Generally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. Mobile homes may not be acceptable in these areas. Some outdoor activities might be adversely affected.					
** Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Outdoor activities may be adversely affected. Residential: Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.					
*** Generally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor activities are likely to be adversely affected.					
**** Unacceptable	New construction or development shall not be undertaken.					

Source: Santa Clara 2010-2035 General Plan, 2010

Chapter 9.10 of the Santa Clara City Code established the following regulations on construction work and fixed sources (Section 9.10.040) of noise:

- Construction activities are not permitted within 300 feet of residentially zone property except within the hours of 7:00 a.m. and 6:00 p.m. on weekdays and 9:00 a.m. and 6:00 p.m. on Saturdays. No Construction is permitted on Sundays or holidays.
- Noise levels from fixed sources are limited at residential uses and public space land uses (e.g., Mission College) to 55 dBA during the daytime (7:00 a.m. to 10:00 p.m.) and 50 dBA during the nighttime (10:00 p.m. to 7:00 a.m.).
- Noise levels at commercial and office land uses are limited to 65 dBA during the daytime (7:00 a.m. to 10:00 p.m.) and 60 dBA during the nighttime (10:00 p.m. to 7:00 a.m.).

- Noise levels at light industrial land uses are limited to 70 dBA day or night. The noise limits are not applicable to emergency work, including the operation of emergency generators, pumps, or other equipment necessary to provide services during an emergency.³⁶

Given that there are no residentially zoned properties or other sensitive land uses within 300 feet of the site (the closest residential area is 0.4 miles from the project boundary), the project would not be subject to the City Code regulation on construction hours. The project would be subject to noise level performance standards for fixed noise sources, commercial and office uses, and light industrial uses.

Project Site Noise

A noise monitoring survey was performed to quantify and characterize ambient noise levels at the site and in the project vicinity. The monitoring survey included two long-term noise measurements and three short-term measurements. Long term measurements ranged between 59 to 67 dBA L_{eq} during the day and 52 to 69 dBA L_{eq} at night. The results of the short-term measurements are summarized **Table 2-7**. The noise monitoring survey found that the most predominate sources of noise measured in the project vicinity includes vehicular traffic, jet aircraft, and mechanical noise.

Table 2-7 Summary of Short-Term Noise Measurements (dBA)

Noise Measurement Location	L_{10}	L_{50}	L_{90}	L_{eq}	Primary Noise Source
345 feet south of Walsh Avenue, 15 feet from east project boundary (4/11/18, 12:40 p.m.)	64	57	54	60	Traffic on Walsh Avenue, intermittent noise from propeller and jet planes, mechanical equipment (53 dBA)
390 feet from Walsh Avenue, 180 feet from west project boundary (4/11/18, 01:00 p.m.)	53	45	46	51	Traffic on Walsh Avenue, pick-up trucks nearby, mechanical equipment (45 dBA)
West side of site, 130 feet south of Walsh Avenue (4/13/18, 11:40 p.m.)	64	57	53	61	Intermittent noise from propeller and jet planes, mechanical equipment (51 dBA)

Source: Illingworth and Rodkin, 2019

a) Would the project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant with Mitigation. As summarized below, with mitigation, both construction and operational noise impacts would be less than significant.

³⁶ City of Santa Clara City Code. Chapter 9.10: *Regulation of Noise and Vibration*. Available: <http://www.codepublishing.com/CA/SantaClara/#!/SantaClara09/SantaClara0910.html>. Accessed: August, 2017.

Short-term Construction Noise

Noise impacts resulting from construction depend upon 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 areas.

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time. Project construction is anticipated to occur over an approximate period of 25 months. However, noise would be generated during only a portion of this period, as interior construction activities would not be anticipated to generate substantial noise.

Temporary construction noise impacts would be considered significant if project construction activities exceeded 60 dBA L_{eq} at nearby residences or exceeded 70 dBA L_{eq} at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA L_{eq} or more for a period longer than one year. Industrial land uses, such as the buildings adjacent to the project site on the south, east and west of the project site are not considered noise-sensitive and would not be subject to temporary construction noise regulations.

Hourly exterior average noise levels due to construction activities would typically range from about 75 to 87 dBA L_{eq} at a distance of 50 feet. Impact pile driving would generate maximum noise levels of up to about 101 dBA L_{max} at a distance of 50 feet, with an hourly average noise level of 95 dBA L_{eq} . The closest residences are located about 0.4 miles southwest of the site, with significant shielding from intervening structures. Noise levels at these residences are not anticipated to be distinguishable from other ambient noise sources.

Maximum instantaneous noise levels during pile driving could occasionally reach 93 dBA L_{max} at the eastern façade of 1180 Walsh Avenue building (Sal's Limo). Existing ambient daytime noise levels at this location range from 61 to 63 dBA L_{eq} . Construction noise at 1180 Walsh Avenue and other nearby industrial uses would exceed 70 dBA L_{eq} and the ambient noise environment by at least 5 dBA L_{eq} occasionally during periods of heavy construction and during pile driving activity. However, the period over which construction noise would exceed applicable thresholds would not be expected to exceed one year at any adjacent noise sensitive location. To ensure that construction-period noise does not result in a significant impact, the following mitigation measure would be required:

Mitigation Measure NOI-1: The following construction BMP's shall be implemented to reduce construction noise levels at existing uses in the project vicinity:

Develop a construction noise control plan, including, but not limited to, the following available controls:

- Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a 5-dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be to reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- A temporary noise control blanket barrier could be erected, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
- Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Evaluate alternatives to driven piles for the foundation, such as drilled piers (caissons) with mat slabs over top or rammed aggregate piers.
- If pile driving is necessary, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.
- If pile driving is necessary, consider the use of "acoustical blankets" for receptors located within 100 feet of the site.
- If pile driving is necessary, consider the use of a noise attenuating shroud on the pile driving hammer.
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone

number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Implementation of **Mitigation Measure NOI-1** would reduce construction noise levels emanating from the site, limit construction hours, and minimize disruption and annoyance, ensuring construction noise impacts would be less than significant.

Operational Noise

As previously discussed, a noise monitoring survey was conducted to quantify and characterize ambient noise levels within the project vicinity and on site.

Traffic noise from the project would be a significant impact if project-generated traffic increases noise by at least 3 dBA CNEL at noise-sensitive receptors where existing noise levels exceed 55 dBA CNEL or by 5 dBA CNEL or greater where existing levels at or below 55 dBA CNEL.³⁷ Residential land uses located approximately 0.4 miles south of the project site are the closest noise-sensitive receptors of the project site. Based on the low number of anticipated employees and correspondingly low trip generation associated with the project, there would be no measurable increase in the CNEL along local roadways in the vicinity of the project.

The project would include rooftop mechanical equipment and backup generators. All rooftop equipment would be shielded by a parapet wall and screen wall measuring 14 feet in height above the top of the roof slab. The generators would be located outside at the southeast side of the building. Each generator would be enclosed, and the generator area would be surrounded by a 30-foot-high acoustical barrier. Substation transformers would be located to the west of the main building. Other mechanical and electrical equipment located inside the building would not be anticipated to emit audible noise outside. Under the Santa Clara City Code, noise generated by non-emergency fixed sources of noise would be restricted to 70 dBA at nearby industrial land uses.

The predominant source of rooftop mechanical equipment noise would be 18 cold water chillers, which would operate continuously. Mechanical equipment noise levels were calculated for the worst-case condition at the property lines of the nearest existing industrial and commercial uses to the east and north of the project site, and at residential uses located about 0.5 mile south of the site.

The exterior noise levels resulting from simultaneous operation of 18 rooftop chillers at the industrial buildings (1519 Walsh Avenue and USPS building) to the north of project site would be 50 dBA L_{eq} . The garage area of the industrial building to the east (1130 Walsh Avenue) would be exposed to 55 dBA L_{eq} and the residences to the southwest would be exposed to 42 dBA L_{eq} . The setback of rooftop equipment and the shielding provided by the rooftop parapet wall and

³⁷ For reference, a 3 dBA CNEL noise increase would be expected if the project would double existing traffic volumes along a roadway and a 5 dBA CNEL noise increase would be expected if the project would triple existing traffic volumes along a roadway.

mechanical equipment screens would result in noise levels below the noise level limits provided that the selected equipment, locations, and barriers are carried through the design process. These levels are below the City's "compatible" noise level threshold for industrial and residential use areas.

The City Code states that noise limits set forth in the code are not applicable to the performance of emergency work, including the operation of emergency generators and pumps or other equipment necessary to provide services during an emergency. However, Santa Clara has applied the noise limits to testing of the standby generators for previous data center buildings. Based on the project design, generators would be housed in individual acoustic enclosures resulting in a noise level of 70 dBA L_{eq} at 23 feet. Each generator would be tested biweekly under no load conditions and monthly under full load for 30 minutes at a time. At most, two generators would be tested in a single day. This testing schedule complies with the BAAQMD permitting which restricts operation of each generator to a maximum of 50 hours per year.

Under the assumption that generator enclosures would provide enough acoustical shielding to produce 70 dBA L_{eq} noise level at 23 feet, one or two generators being tested simultaneously would not result in any increase in the ambient noise levels. In a worst-case scenario when all 11 generators would be operational, the noise level at the garage area of 1130 Walsh Avenue would be exposed to 57 dBA L_{eq} .

Because the noise exposure levels are below Santa Clara's allowable exterior levels of 70 dBA L_{eq} at industrial uses, and 55 dBA daytime L_{eq} at residences, this impact would be less than significant.

b) Would the project expose persons to excessive groundborne vibration or groundborne noise levels?

Less than Significant with Mitigation. The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include demolition, site preparation, grading and excavation, trenching, building (exterior), interior architectural coating, and paving. Pile driving is anticipated for construction of the building foundation.

To avoid structural damage, the California Department of Transportation recommends a vibration limit of 0.5 inches/second peak particle velocity (PPV) for buildings that are structurally sound and designed to modern engineering standards, which typically consist of buildings constructed since the 1990s. A conservative vibration limit of 0.3 in/sec PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern. For historical buildings or buildings that are documented to be structurally weakened, a conservative limit of 0.08 in/sec PPV is often used to provide the highest level of protection. This analysis assumes that buildings adjoining the site were constructed prior to the 1990s and are structurally sound. Therefore, ground-borne vibration levels exceeding the conservative 0.3 in/sec PPV limit would have the potential to result in a significant vibration impact.

The use of pile drivers, and to a lesser extent other construction equipment, would require some attention to ensure that nearby structures are sufficiently protected. Impact pile driving, if used, has

the potential of generating the highest ground vibration levels and is of primary concern to structural damage, particularly when it occurs within 100 feet of structures. Vibratory pile driving is of concern when it would occur within 60 feet of structures. Vibration levels generated by pile driving activities would vary depending on project conditions such as soil conditions, construction methods, and equipment used.

Other project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may also potentially generate substantial vibration in the immediate vicinity. Erection of the building structure is not anticipated to be a source of substantial vibration with the exception of sporadic events such as dropping of heavy objects, which should be avoided to the extent possible. Jackhammers typically generate vibration levels of 0.035 inches/sec PPV and drilling typically generates vibration levels of 0.09 inches/sec PPV at a distance of 25 feet.

Vibration levels at the 1180 Walsh Avenue building, located 15 feet northwest of the project, could reach 0.4 in/sec VVP during construction. **Mitigation Measure NOI-2** would be implemented to reduce this potentially significant impact.

Mitigation Measures NOI-1: The following measures would be implemented in order to reduce vibration impacts:

- Avoid impact pile driving where possible. Drilled piers or rammed aggregate piers cause lower vibration levels where geological conditions permit their use.
- A list of all heavy construction equipment to be used for this project and the anticipated time duration of using the equipment that is known to produce high vibration levels (clam shovel drops, vibratory rollers, hoe rams, large bulldozers, caisson drillings, loaded trucks, jackhammers, etc.) shall be submitted by the contractor. This list shall be used to identify equipment and activities that would potentially generate substantial vibration and to define the level of effort required for continuous vibration monitoring. Use of heavy vibration-generating construction equipment within 25 feet of any adjacent building should be avoided, where possible.
- A construction vibration monitoring plan shall be implemented to document conditions prior to, during, and after vibration generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. The construction vibration monitoring plan should be implemented to include the following tasks:
 - Identification of the sensitivity of nearby structures to ground borne vibration. Vibration limits should be applied to all vibration-sensitive structures located within 100 feet of any pile driving activities and 25 feet of other construction activities identified as sources of high vibration levels.

- Performance of a photo survey, elevation survey, and crack monitoring survey for each structure of normal construction within 100 feet of pile driving activities and/or within 25 feet of other construction activities identified as sources of high vibration levels. Surveys shall be performed prior to any construction activity, in regular interval during construction, and after project completion, and shall include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations, walls and other structural elements in the interior and exterior of said structures.
- Development of a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits.
- At a minimum, vibration monitoring should be conducted during pavement demolition, excavation, and pile driving activities. Monitoring results may indicate the need for more or less intensive measurements.
- If vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.
- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site.
- Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.
- The results of all vibration monitoring shall be summarized and submitted to Santa Clara in a report shortly after substantial completion of each phase identified in the project schedule for the City to verify implementation of the vibration monitoring plan. The report will include a description of measurement methods, equipment used, calibration certificates, and graphics as required to clearly identify vibration-monitoring locations. An explanation of all events that exceeded vibration limits will be included together with proper documentation supporting any such claims.

With implementation of **Mitigation Measure NOI-2**, which requires work to be temporarily suspended if vibration levels approach the 0.3 in/sec PPV limit, this impact would be less than significant.

- c) **Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Less than Significant with Mitigation. As previously discussed, implementation of **Mitigation Measure NOI-2** would ensure the project would not substantially increase permanent ambient noise levels in the project vicinity. Please see discussion under **question 2.12 “a”**.

- d) **Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Less than Significant with Mitigation. As previously discussed, implementation of **Mitigation Measure NOI-1** would ensure the project would not substantially increase temporary or periodic ambient noise levels at the project site. Please see discussion under **question 2.12 “a”**.

- 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, would the project expose people residing or working in the project area to excessive noise levels?**

Less than Significant. The San Jose International Airport is a public-use airport located approximately 1 mile east of the project site. Although aircraft-related noise is occasionally audible at the project site, noise from aircraft would not substantially increase ambient noise levels. The project site lies outside the 65 dBA CNEL 2022 noise contours shown in Figure 5 of the Comprehensive Land Use Plan updated in November 2016. Exterior and interior noise levels resulting from aircraft would be compatible with the project. Therefore, this impact would be less than significant. No mitigation is required.

- f) **For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

No Impact. The project is not located within the vicinity of a private airstrip. Given this, no impact would occur.

2.13 Population and Housing

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

A jobs-to-housing ratio is generated by dividing the number of jobs in a city by the number of housing units in the same city. A balance between jobs and housing can help to alleviate issues such as congestion and transportation-related environmental impacts by allowing people to work closer to their homes. Given the high cost of housing in California and in the Bay Area in particular, most households require more than one wage-earner to afford housing in the region. The jobs-to-housing ratio in Santa Clara was estimated at 2.50 in 2010 and is projected to slightly decrease to 2.48 by 2040 (City of Santa Clara, 2014).

Construction of large employment centers can induce population growth by enticing new employees to move from other locales. Population growth can also be induced through the creation of large housing development. In either case, rapid growth can disturb the jobs-housing balance of a city to create an imbalance and produce environmental impacts by increasing demand for services and infrastructure.

- a) **Would the project 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)?**

Less than Significant. The project is an industrial use that does not include the construction of residential units. The project is expected to require up to 40 employees, which would not result in a substantial increase in employment such that population growth could be induced indirectly. No mitigation is required.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. There is no housing on the project site; therefore, the project would not displace individuals or residents, necessitating the construction of replacement housing elsewhere. No impact would occur.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As mentioned above, there is no housing on the project site; therefore, the project would not displace individuals or residents, necessitating the construction of replacement housing elsewhere. No impact would occur.

2.14 Public Services

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The information below was compiled through consultation with public service providers and research of publicly available emergency service data. Although people may move to Santa Clara in order to work at the data center, it is more likely that local employees would be recruited. Regardless, this discussion assumes data center employees to be net new in order to present a conservative analysis.

Fire protection

Fire protection services for the project site are provided by the Santa Clara Fire Department (SCFD) which is comprised of 180 personnel and 10 fire stations.³⁸ The closest fire station to the project site is Station 2 located at 1900 Walsh Avenue, approximately 0.2 miles west of the project site.

Police protection

Police service to the project site is provided by Santa Clara of Santa Clara Police Department (SCPD) which operates from its headquarters at 601 El Camino Real, approximately 1.4 miles southeast from the project site, and the Northside Police Substation at 3992 Rivermark Parkway, approximately 1.8 miles north from the project site. The SCPD has 155 sworn officers, 76 support personnel and a varying number of part-time or per diem employees, volunteers and Police Reserves.³⁹ In 2016, the SCPD received approximately 50,211 police calls and 28,374 self-initiated calls for police service.

Schools and Parks

The Santa Clara Parks and Recreation Department provides parks and recreational services in Santa Clara. 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 Santa Clara. Overall, as of July 2018, the Department maintains and operates a total of 38 parks throughout Santa Clara. Facilities include the Santa Clara Golf and Tennis Club, Community Recreation Center, Senior Center, Youth Activity Center, International Swim Center, Reed Street Dog Park, and Skate Park. Ulistac Natural Area, a 40-acre open space park on the former Fairway Glen golf course, opened in 2001. Counting the Golf and Tennis Club's 155 acres, Santa Clara's 38 parks, playgrounds and open space totals approximately 450 acres. The closest neighborhood park to the project site is Memorial Cross Park, which is approximately 0.85 miles east of the project site.

According to the General Plan, six public school districts serve Santa Clara: Santa Clara Unified School District (SCUSD), San Jose Unified School District, Cupertino Union School District, Fremont Union High School District, Campbell Union School District, and Campbell Union High School District. The closest SCUSD schools to the project site are Bracher Elementary School, located at 2700 Chromite, and Scott Lane Elementary located at 1925 Scott Boulevard, 1 mile southwest and 0.70 mile south, respectively.⁴⁰

³⁸ Santa Clara Fire Department. History of the Fire Department. Available:

<http://santaclaraca.gov/government/departments/fire/about-us/history>. Accessed: July, 2018

³⁹ Santa Clara Police Department. About Us. Available: <http://santaclaraca.gov/government/departments/police-department/about-us>. Accessed: July, 2018.

⁴⁰ Santa Clara Unified School District. Our Schools. Available: <http://www.santaclarausd.org/schools.cfm>. Accessed: July, 2017.

- a) **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:**

i. Fire protection impacts?

and

ii. Police protection?

Less than Significant. Fire and police protection services are currently provided to the project site by the SCFD and SCPD. The project would adhere with current fire codes to reduce potential fire hazards and would be consistent with appropriate safety standards to minimize criminal activity.

Implementation of the project would not create a substantially increased demand for police or fire services. The project would introduce a daily maximum of 40 employees to a currently vacant site (30 daytime employees and 10 nighttime employees). Because the project would not include housing or other uses that would induce substantial population growth in the area, the project would not increase demand on fire or police protection providers such that new facilities would be required. Therefore, this impact would be less than significant. No mitigation is required.

iii. Schools?

and

iv. Parks?

Less than Significant. The project would not include any residential uses. As stated in the introduction, this analysis assumes that all data center employees (up to 30 during the day and 10 at night) would be new to Santa Clara. However, this small net increase in the daily employee population in Santa Clara would not result in a substantial increase in usage of local recreational facilities. Although future employees might use City parks or trails for running and similar outdoor exercise, this use would be unlikely to place a major physical burden on existing parks. Likewise, this small net increase in daily employee population would correspond to a negligible increase in school-aged children. Therefore, the project would not have a significant impact on school or park facilities in Santa Clara. No mitigation is required.

v. Other public facilities?

No Impact. Open space and other public facilities such as libraries, are typically provided to serve residents within Santa Clara. Given the project has no residential component, project implementation would not increase demand for open space or other public facilities. Therefore, there would be no impact to public facilities.

2.15 Recreation

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

As discussed under **Section 2.14, Public Services**, the Parks and Recreation Department provides parks and recreational services in Santa Clara. 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 Santa Clara. According to Santa Clara's map of parks and pool facilities around the City, the nearest general use public park to the project site is Rotary Park.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

OR

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?

Less than Significant. The project would not include any residential uses. Although future employees might use City parks or trails for running and similar outdoor exercise, this use would be unlikely to place a major physical burden on existing parks and would not require the construction or expansion of recreational facilities. Therefore, the project would not have a significant impact on park facilities in Santa Clara. No mitigation is required.

2.16 Transportation and Traffic

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The following discussion qualitatively analyses potential impacts on the local transportation network.

Regional Access

Regional access to the project site is provided by US- 101, located north of the project site. US-101 is a north-south freeway which extends northward through San Francisco and southward through San Jose. Primary access to and from US-101 is provided via San Tomas Expressway and Scott Boulevard.

Local Access

Roadways that provide primary circulation in the immediate vicinity of the project site include San Tomas Expressway, Central Expressway, Scott Boulevard, and Walsh Avenue. Access provided by each roadway is discussed below:

- **Scott Boulevard** is generally a four-lane divided north-south arterial.
- **Walsh Avenue** is a four-lane divided east-west arterial in the vicinity of the project site. Walsh begins at Bowers Avenue and ends just east of Lafayette Street. Walsh Avenue becomes Kifer Road west of Bowers Avenue. The project site is located at 1150 Walsh Avenue
- **San Tomas Expressway** is a generally north-south expressway with a full cloverleaf interchange at US-101. San Tomas Expressway becomes Montague Expressway north of US-101.
- **Central Expressway** is generally a six-lane east-west expressway.

The General Plan provides traffic conditions in the vicinity of the project site for existing (2008) and future (2035) conditions. The level of service (LOS) on Scott Boulevard between Central Expressway and Monroe Street was LOS C in 2008 and is expected to remain at LOS C in 2035. Walsh Avenue between Scott Boulevard and Lafayette Street operated at LOS C in 2008 and would continue to operate at LOS C in 2035.. San Tomas Expressway operated at LOS D between Central Expressway and Monroe Street in 2008 and is expected to continue operating at LOS D in 2035. Central Expressway operated at LOS C from San Tomas Expressway to Scott Boulevard and LOS D from Scott Boulevard to Lafayette Street in 2008. Both segments are expected to operate at LOS D in 2035.

The Santa Clara Valley Transportation Authority (VTA) provides bus services within Santa Clara County. Two local bus routes operate in the project vicinity: route 60 and 827. Route 60 operates between the Winchester Transit Center and Great America with a stop 0.25-mile west of the project site on Scott Boulevard. Route 827 is a shuttle service that connects the Altamont Corridor Express (ACE) Great America Station with neighborhoods located along Scott Boulevard, Bowers Avenue, and Walsh Avenue. The nearest stop is 0.30 mile west of the project site on Walsh Avenue. Light Rail and Caltrain stations are not in close proximity to the project area.

- a) **Would the project 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?**

OR

- b) **Would the project 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?**

Less than Significant. Several intersections within the project vicinity are listed in the 2017 Congestion Management Plan (CMP) Monitoring and Conformance Report published by VTA.⁴¹ Such intersections include San Tomas Expressway/Monroe Street and Central Expressway/Scott Boulevard. These intersections both currently operate at an acceptable LOS of E or better.

According to the Institute of Transportation Engineers (ITE), data centers feature among the lowest trip generation rates at 0.99 trips daily per every 1,000 square feet.⁴² Using the ITE rate, the project would produce an estimated 156 total daily trips. Given that the project site is currently vacant, all trips would be considered net new. The generation of 156 daily trips would be consistent with the local zoning (MH) which allows for data center uses, and the amount of traffic generated by the project can reasonably be accommodated on the existing roadway system based on existing and future LOS forecasts. Therefore, the project would not conflict with any applicable plan, ordinance or policy establishing measures of effectiveness for performance of the circulation system. The impact would be less than significant and no mitigation is required.

- c) **Would the project 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?**

No Impact. The project would not affect air traffic. As previously discussed in **Section 2.8, Hazards and Hazardous Materials**, the project would not result in an airport safety hazard that could affect air traffic patterns. Therefore, the project would not result in any foreseeable change to air traffic patterns. No impact would occur.

- d) **Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

No Impact. The project does not include any changes to local streets, intersections, or involve incompatible land uses. Access to the project site would continue to be provided via curb cuts on Walsh Avenue. As such, the project would not introduce or increase hazards to design features. No impact would occur.

⁴¹ VTA. 2016. *2016 CMP Monitoring and Conformance Report*. Accessed: November, 2018

⁴² Institute of Transportation Engineers. 2012. *Trip Generation Manual: 9th Edition*. Accessed: August, 2018.

e) Would the project result in inadequate emergency access?

No Impact. Emergency access to the project site would continue to be provided by existing roadways. Emergency access would be provided via curb cuts on Walsh Avenue. As a condition of approval, the project would be required to comply with all emergency access standards of the Santa Clara Fire Department and Police Department. Therefore, the project would not result in inadequate emergency access. No impact would occur.

f) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The project would not conflict with any adopted policies, plans, or programs that support public transit, bicycle, or pedestrian facilities. The project does not include any external circulation improvements on nearby roadways nor would the project result in a permanent increase in population that would use public transit, bicycle or pedestrian facilities. No impact would occur.

2.17 Tribal Cultural Resources

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

Information in this section was incorporated from a Sacred Lands File search and a CHRIS records search, both of which were completed for the project site in April 2018.

a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

i. **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)**

Less than Significant. As stated above in **Section 2.5, Cultural Resources**, an evaluation of built structures and the likelihood of previously unknown archeological resources was completed for the project site. The evaluation determined there are no eligible historic resources on the site and the likelihood for archeological or other cultural resources is low.

Additionally, on April 20, 2018, Santa Clara sent letters to the following Native American tribes: Muwekma Ohlone Indian Tribe and Ohlone Indian Tribe. The letters contained information about the project; an inquiry for any unrecorded Native American cultural resources or other areas of concern within or adjacent to the project site; and a solicitation of comments, questions, or concerns with regard the project. To date, no responses have been received. Based on the above, this impact would be less than significant. No mitigation is required.

ii. **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less than Significant with Mitigation. A Sacred Lands File search was requested on April 11, 2018. The Sacred Lands File, operated by the NAHC, is a confidential set of records containing places of religious or social significance to Native Americans. A response from the NAHC was received on April 16, 2018 and indicated that Native American cultural sites have previously been identified on the project site. The NAHC directed Santa Clara to consult with two tribes—the Muwekma Ohlone Indian Tribe and the Ohlone Indian tribe—and recommended consultation with four additional tribes associated with the region. On April 20, 2018, Santa Clara sent letters to the following Native American tribes: Muwekma Ohlone Indian Tribe, and Ohlone Indian Tribe. The letters contained information about the project; an inquiry for any unrecorded Native American cultural resources or other areas of concern within or adjacent to the project site; and a solicitation of comments, questions, or concerns with regard the project. To date, no responses have been received. The tribes that were identified and contacted by Santa Clara would be given a copy of the IS/MND to ensure that they have the opportunity to comment on the project during the public circulation period.

In accordance with Section 21080.3.1 of the California Public Resources Code and AB 52, Santa Clara of Santa Clara has provided a Notice of Opportunity to Native American tribes to request consultation for projects within the city. To date, Santa Clara has not received any requests from regional tribes to be included on the AB 52 list.

In addition to tribal consultation, implementation of **Mitigation Measure CUL-1 and CUL-3** would ensure any previously unidentified Native American archeological resources or remains encountered during construction are handled appropriately. With implementation of these mitigation measures, impacts to tribal cultural resources would be less than significant.

2.18 Utilities and Service Systems

	Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Potable Water

The Santa Clara Department of Water and Sewer Utilities provide water service to Santa Clara and would service to the project site. The Santa Clara Water Utilities' water system consists of approximately 335 miles of water mains, 7 storage tanks, and 26 wells that tap the underground aquifers and make up 62 percent of Santa Clara's water supply.⁴³ Santa Clara's water system produces and average of 15.7 million gallons per day, and has 28.8 million gallons of water storage capacity.⁴⁴ The remainder of Santa Clara's potable water supply is purchased from two wholesale water agencies: Valley Water and the San Francisco Hetch Hetchy System. Sixteen percent of Santa Clara's water use is composed of recycled water, discussed below. Existing utility connections on site include domestic water pipelines along Walsh Avenue.

Recycled Water

Santa Clara's fourth source of water consists of tertiary treated (or 'recycled') water which accounts for 16 percent of the Santa Clara's water use. Recycled water within Santa Clara is supplied from the jointly owned San Jose-Santa Clara Regional Wastewater Facility (RWF). Recycled water from the plant is delivered to Santa Clara through a system of water pipelines totaling 33 miles.⁴⁵ Santa Clara utilizes recycled water in order to offset and conserve use of potable water citywide. Recycled water is primarily used for irrigation within Santa Clara, however, several industries use recycled water in industrial processes, cooling towers or for flushing toilets in dual plumbed buildings.⁴⁶

Wastewater

Wastewater from Santa Clara is collected and treated at the RWF. The RWF is jointly owned by the Cities of San Jose and Santa Clara and is operated by the City of San Jose's Department of Environmental Services. The RWF provides primary, secondary, and tertiary treatment of wastewater and has capacity to treat 167 million gallons per day, with an average of 110 million gallons per day.⁴⁷

Santa Clara owns and operates the wastewater collection system within the City. According to Santa Clara's Urban Water Management Plan, the system includes over 270 miles of sewer mains and 7 pump

⁴³ City of Santa Clara Water & Sewer Utility. Available: <http://santaclaraca.gov/government/departments/water-sewer-utilities/recycled-water-utility>. Accessed: July, 2018.

⁴⁴ City of Santa Clara Water & Sewer Utility. Fact Sheet. Available: <http://santaclaraca.gov/government/departments/water-sewer-utilities/fact-sheet>. Accessed: August, 2018.

⁴⁵ City of Santa Clara Water & Sewer Utilities. Recycled Water Utility. <http://santaclaraca.gov/government/departments/water-sewer-utilities/recycled-water-utility>. Accessed: August, 2018.

⁴⁶ City of Santa Clara Water and Sewer Utilities. 2015. *Urban Water Management Plan*. <http://santaclaraca.gov/home/showdocument?id=48088>. Accessed: August, 2018.

⁴⁷ City of San Jose. *San Jose-Santa Clara Regional Wastewater Facility Fact Sheet*. <http://www.sanjoseca.gov/DocumentCenter/View/34681>. Accessed: August 6, 2018.

stations to convey an average of 15mgd of wastewater to the RWF, located just north of Highway 237 in San Jose.

Solid Waste

According to the General Plan EIR, solid waste collection services are provided by the Mission Trail Waste System (Mission Trail) through a contract with Santa Clara. Mission Trail also has a contract to implement the Clean Green portion of Santa Clara's recycling plan by collecting yard waste. Santa Clara has an arrangement with the owners of the Newby Island Landfill, located in San Jose, to provide disposal capacity for Santa Clara through 2024. Recycling services are provided through Stevens Creek Disposal and Recycling.

Natural Gas and Electricity Services

Electric and gas services within Santa Clara are provided by SVP and Pacific Gas and Electric (PG&E), respectively. SVP owns more than 510-MW of electric-generating resources supplemented by purchase agreement for 261-MW of additional capacity for a total capacity of 771 MW. This capacity far exceeds Santa Clara's current peak electricity demand of approximately 585-MW. No new generation peak capacity is necessary to meet the capacity requirements of new construction.

The majority of the electrical load for the project would be served by a new substation—constructed as part of the project—which would be capable of providing 27 MW service exclusively to the data center. The new substation would be located on the western portion of the project site, as depicted in **Figure 2**. As noted in the project description, the developer and SVP would both own equipment in the substation and would each be responsible for service and maintenance of their respective equipment.

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

And

b) Would the project 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?

Less than Significant. The project would include installation and operation of rooftop economizing chillers. These devices would use chilled water to cool down servers using a closed-loop chilled water system. Therefore, no water treatment would be required. A 3-inch industrial waterline would be brought to the roof to provide a filling station for the chilled water loops.

The anticipated wastewater generated per employee is 20 gallons per person per 8 hours of a work day. It is anticipated that up to 30 employees would work during daytime work hours and up to 10 employees per shift would work in the building in the evening and overnight, for a total of up to 40 employees every 24 hours. Therefore, wastewater generated by employees is estimated to be approximately 800 gallons per day. Including employee generated wastewater, water used for

cooling systems, and other uses, the project is estimated to use 173,752 gallons annually or approximately 476 gallons per day.⁴⁸

The existing sanitary sewer main serving the project site was measured at 0.32 inches depth of flow in a 2010 sanitary sewer study. Full capacity is 0.75 inches depth of flow. Based on this, it is anticipated the existing sanitary sewer system at the project site would continue to be adequate and would have the capacity to convey additional flows from the project.

Precise daily wastewater generation for the site under existing conditions is not known, and therefore the entire 476 daily gallons of wastewater that would be generated by the project is considered to be a net increase. A daily net increase of 476 gallons would constitute less than 1 percent of the RWF's unused capacity.⁴⁹ Therefore, the RWF would have sufficient capacity to accommodate increased flows and would not require construction or expansion of existing facilities. Given that the project would occupy a site currently developed and served by the RWF, and the increase in wastewater would be within RWF's unused capacity, impacts to wastewater treatment facilities and requirements would be less than significant. No mitigation is required.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant. As previously discussed in **Section 2.9, Hydrology and Water Quality**, project site modifications would not increase stormwater runoff. The project site would adhere to NPDES permit requirements, ensuring project stormwater runoff would not exceed existing runoff currently experienced at the site. Therefore, the project would not require the construction of new stormwater drainage or expansion of existing facilities, and there would be a less-than-significant impact. No mitigation is required.

d) Are there sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant. The Santa Clara Water and Sewer Utilities currently service the project site. The project would require potable water for restrooms, the break area, and to run the cooling system. Landscaping would be irrigated with recycled water via the existing recycled water line which runs along the Walsh Avenue right-of-way. As previously discussed in **Section 2.9, Hydrology and Water Quality**, Santa Clara has sufficient potable water supplies to service the project. Therefore, there would be no need to develop additional resources or entitlements to serve the project. There would be a less-than-significant impact. No mitigation is required.

⁴⁸ Santa Clara. 2018.

⁴⁹ Wastewater from the site would continue to be treated by the RWF in San Jose. RWF has a treatment capacity of 167 million gallons per day and an average daily treatment of 110 million gallons per day. Therefore, RWF has an additional 57 million gallons per day of capacity remaining.

- e) **Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Less than Significant. As stated above, the RWF has available capacity to serve the project (see discussion for **questions 2.18 "a" and "b"**). Therefore, the project would not require the construction of new water or wastewater treatment facilities, and any impacts would be less than significant. No mitigation is required.

- f) **Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Less than Significant. Construction activities such as utility trenching and foundation excavation would generate construction debris and excavated materials on site. Where feasible, such material would be used on site or recycled to reduce impacts on local and regional landfills. Material that cannot feasibly be used on site or recycled would be off-hauled by trucks to the Newby Island Sanitary Landfill. Before export, soils would be tested to determine if disposal at a hazardous materials facility is required, as discussed in **Section 2.8, Hazards and Hazardous Materials**.

Once operational, solid waste generated by the project would be disposed at the Newby Island Sanitary Landfill, which is contracted to provide disposal capacity for Santa Clara through 2024. The landfill currently has approximately 37 percent of its maximum capacity available.⁵⁰ It is assumed that the amount of solid waste generated by the project would be minimal, as there would be a maximum of 40 employees daily. Therefore, the project would not result in an increase of solid waste at the Landfill that would exceed its capacity. Furthermore, the project would adhere to Santa Clara's recycling and waste reduction programs. Given this, the project would be served by a landfill with sufficient capacity to service to the project. There would be a less-than-significant impact. No mitigation is required.

- g) **Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

Less than Significant. Assembly Bill 939 (AB 939) relates to solid waste diversion requirements for the State of California. In 1995, all jurisdictions in California were required by AB 939 to divert 25 percent of waste generation from landfill. By the year 2000, all California Jurisdictions were required to divert 50 percent of waste generation from landfills. The Solid Waste Disposal Measurement System Act, California Senate Bill 1016 (SB 1016), was passed in 2008 and required the AB 939 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent.

⁵⁰ California Department of Resources Recycling and Recovery (CalRecycle). Solid Waste Information System, Newby Island Sanitary Landfill. <http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0003/Detail/>. Accessed: May, 2018.

In the year 2010, Santa Clara reported an annual per capita disposal rate of 7 pounds per day (PPD) per employee, surpassing the Per Employee Disposal Target Rate of 9 PPD set for Santa Clara by the California Department of Resources Recycling and Recovery (CalRecycle). It is assumed that the amount of solid waste generated by the 40 daily employees would be minimal and therefore, the project would not result in a net increase of solid waste in Santa Clara that would jeopardize Santa Clara's consistency with AB 939 and SB 1016. Given this, the project would have a less-than-significant impact. No mitigation is required.

2.19 Mandatory Findings of Significance

	Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a) Have the potential to degrade 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation. As described in **Section 2.4, Biological Resources**, **Section 2.5, Cultural Resources**, and **Section 2.17, Tribal Cultural Resources**, the project includes mitigation measures to reduce potential impacts to wildlife and cultural resources. Implementation of

mitigation measures described in this Initial Study would reduce all potentially significant impacts of the project to a less-than-significant level.

- b) Does the project have impacts that are individually limited, but cumulative considerable? (“Cumulative 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)?**

Less than Significant with Mitigation. Cumulative impact analysis determines whether an individual project in combination with other approved or foreseeable projects would result in significant impacts. If cumulative impacts could occur, cumulative analysis asks whether the project’s contribution to the significant cumulative impact would be cumulatively considerable.

The analysis of cumulative impacts for each environmental factor can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or, alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents may describe or evaluate the regional or area-wide conditions contributing to the cumulative impact.

This Initial Study evaluates cumulative impacts using the Santa Clara 2010-2035 General Plan Integrated Environmental Impact Report (EIR) (2011). The General Plan Integrated EIR evaluated future development, as identified in the current General Plan, and concluded that the following significant environmental impacts would occur.

- Exacerbation of land use impacts arising from the jobs–housing imbalance;
- Degradation of traffic operations on regional roadways and highways within Santa Clara of an unacceptable level of service;
- Contribution to solid waste generation beyond available capacity after 2024;
- Contribution to solid waste generations beyond available capacity after 2024;
- Contribution to GHG emission exceeding Santa Clara’s emission reduction target for 2035; and
- Increase in localized traffic noise level on roadway segments throughout Santa Clara.

Given the above, the project’s contribution to these impacts must be evaluated.

Population and Housing

The General Plan Integrated EIR identified significant cumulative land use impacts from the build-out of the General Plan land use designations, in conjunction with other regional development. The EIR concluded that the proposed land uses would create a regional jobs-housing imbalance, as

workers who are unable to live near their employment would commute long distances from outlying areas. As described in **Section 2.13, Population and Housing**, the project would not result in a substantial increase in employment. Therefore, the project's contribution to this significant impact would not be considerable.

Transportation and Traffic

As previously discussed in **Section 2.16, Transportation and Traffic**, the project would not result in a significant increase in traffic on surrounding roadways and highways and in fact is anticipated to result in a net decrease in daily trips. Therefore, the project would not contribute to the cumulative traffic operation impact within Santa Clara.

Utilities and Service Systems

As previously discussed in **Section 2.18, Utilities and Service Systems**, the project would not result in a significant increase in solid waste generation. Although the General Plan Integrated EIR identified solid waste generation as a significant impact, the amount of solid waste generated by the project operations would be minimal, as data centers typically require very little equipment turnover, and there would be a maximum of 40 employees every 24 hours. Therefore, the project's contribution to this significant cumulative impact would not be considerable.

Greenhouse Gas Emissions

As previously discussed in **Section 2.7, Greenhouse Gas Emission**, the project's GHG emissions would be consistent with applicable plans, policies or regulations. Therefore, the project's contribution to this significant cumulative impact would not be considerable.

Noise and Vibration

As previously discussed in **Section 2.12, Noise and Vibration**, with implementation of **Mitigation Measures NOI-1 and NOI-2**, the project would not exceed applicable noise level standards for the project site. Although the General Plan Integrated EIR identified a significant impact related to the localized noise increase in traffic noise level on roadway segments, the project would not result in a net increase in traffic on surrounding roadways and highways and would not contribute to an increase in traffic noise levels. Therefore, the project would not contribute to this significant cumulative impact.

Air Quality

By their nature, air quality impacts are cumulative. As discussed in **Section 2.3, Air Quality**, with implementation of **Mitigation Measure AQ-1**, the project would not contribute to cumulative air quality impacts.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant with Mitigation. As previously discussed throughout this Initial Study, the project would not result in significant environmental impacts on human beings with implementation of mitigation measures. Mitigation measures are identified in this Initial Study to reduce potential significant impacts related to air quality impacts, hazards, and noise which could otherwise effect humans. Implementation of these mitigation measures would ensure that the project would not result in impacts that would cause significant impacts on human beings, either directly or indirectly.

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