RESOLUTION NO. 25-9449

A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA, TO ADOPT THE MITIGATED NEGATIVE DECLARATION AND THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE HOMESTEAD SUBSTATION REBUILD PROJECT

WHEREAS, the City of Santa Clara ("City") proposes to reconstruct and rebuild the existing Homestead Substation at its current location ("Project") as more fully described in the mitigated negative declaration referenced below;

WHEREAS, the City is the lead agency for the preparation and consideration of environmental documents for the Project, as defined in the California Environmental Quality Act and the State of California Guidelines for the Implementation of the California Environmental Quality Act (collectively, "CEQA");

WHEREAS, pursuant to CEQA, specifically section 15070 of Title 14 of the California Code of Regulations, the City prepared an initial study which identified the Project's potentially significant effects on the environment, which will be avoided or mitigated through the implementation of the Mitigated Negative Declaration ("MND") and Mitigation Monitoring and Reporting Program ("MMRP");

WHEREAS, the City prepared the MND and MMRP and circulated these documents for a 30-day public review period between November 18, 2022, and December 21, 2022, in compliance with the requirements of CEQA;

WHEREAS, during the public review period, the City received comments from Santa Clara Valley Water District and an adjoining property owner;

WHEREAS, the City prepared a "Responses to Comments" document is included in Section 8 of the MND and addresses all comments raised;

//

//

//

WHEREAS, the City conducted its own independent analysis of the MND and MMRP prior to releasing it for public review and determined that the MND and MMRP were appropriate as there is substantial evidence the Project would not result in any significant environmental impacts;

WHEREAS, the Santa Clara City Council has reviewed and considered the MND, MMRP, the comments received to date and the responses prepared, and the City Council, in reviewing the Project as proposed, intends to take actions on the Project in compliance with CEQA; and

WHEREAS, the MND and the MMRP have been attached to the report to council (RTC #25-330) for this environmental approval and the approval of the Project and, by this reference, are incorporated into this Resolution as if fully set forth herein.

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

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

2. That based on the whole record before it, the City Council hereby finds that all potentially significant environmental impacts that may directly or indirectly result from the Project would be reduced to a less than significant level by the mitigation measures specified in the MND and MMRP and that there is no substantial evidence that the project will have a significant effect on the environment.

3. That the City Council hereby finds that the MND and MMRP is complete, prepared in compliance with CEQA, and represents the independent judgment of the City Council.

4. That the City Council further finds that the MND and MMRP are adequate to serve as the required CEQA environmental documentation for the Project and hereby adopts the MND and MMRP for the Project.

//

//

5. That the City Council hereby designates the Director of Silicon Valley Power of the City of Santa Clara as the Custodian of Records for the Project, and the Planning Division at City Hall, 1500 Warburton Avenue, Santa Clara, California, is the location of the documents and other material that constitute the record of proceedings upon which this decision is based.

6. That the City Council directs the City Manager or designee to file a notice of determination with the County of Santa Clara and State Clearinghouse.

7. Effective date. This Resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE 10TH DAY OF JUNE, 2025, BY THE FOLLOWING VOTE:

AYES:	COUNCILORS:	Chahal, Cox, Gonzalez, Hardy, Jain, and Park, and Mayor Gillmor
NOES:	COUNCILORS:	None
ABSENT:	COUNCILORS:	None
ABSTAINED:	COUNCILORS:	None

ATTEST: _____
NORA PIMENTEL, MMC
ASSISTANT CITY CLERK
CITY OF SANTA CLARA

Attachments incorporated by reference:
1. Mitigated Negative Declaration
2. Mitigation Monitoring and Reporting Program

FINAL

Mitigated Negative Declaration and Supporting Initial Study

Homestead Substation Rebuild Project

February 2023

Existing Homestead Substation

Lead Agency

Project Sponsor

Technical Assistance

FINAL

Mitigated Negative Declaration and Supporting Initial Study for Silicon Valley Power's Homestead Substation Rebuild Project

Lead Agency:

City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

Project Sponsor:

Silicon Valley Power
881 Martin Avenue
Santa Clara, CA 95050

Technical Assistance:

Aspen Environmental Group
235 Montgomery Street, Suite 640
San Francisco, CA 94104

February 2023

Contents

List of Acronyms ..... **iv**

1. Mitigated Negative Declaration **1-1**
1.1 Project Information 1-1
1.2 Introduction 1-1
1.3 Project Description 1-2
1.4 Environmental Determination 1-2

2. Environmental Determination **2-1**
2.1 Environmental Factors Potentially Affected 2-1
2.2 Environmental Determination 2-1

3. Introduction to the Initial Study **3-1**
3.1 Proposed Project Overview 3-1
3.2 Environmental Analysis 3-1
3.2.1 CEQA Process 3-1
3.2.2 CEQA Lead Agency 3-1
3.2.3 Initial Study 3-1

4. Project Description **4-1**
4.1 Project Title 4-1
4.2 Lead Agency Name and Address 4-1
4.3 Lead Agency Contact Person and Phone Number 4-1
4.4 Project Location 4-1
4.5 Project Sponsor's Name and Address 4-1
4.6 General Plan Designation 4-1
4.7 Zoning 4-1
4.8 Surrounding Land Uses and Setting 4-2
4.9 Other Public Agencies Whose Approval is Required 4-2
4.10 Description of the Project 4-2
4.10.1 Overview 4-2
4.10.2 Project Objectives 4-3
4.10.3 Project Components 4-3
4.10.4 Project Construction Activities 4-4
4.10.5 Operation and Maintenance 4-9
4.10.6 Required Approvals 4-9
4.10.7 Electric and Magnetic Fields Summary 4-9
4.10.8 Alternatives 4-10

5. Environmental Setting and Environmental Impacts **5-1**
5.1 Aesthetics 5.1-1
5.1.1 Setting 5.1-1
5.1.2 Environmental Impacts and Mitigation Measures 5.1-2
5.2 Agriculture and Forestry Resources 5.2-1
5.2.1 Setting 5.2-1
5.2.2 Environmental Impacts and Mitigation Measures 5.2-2
5.3 Air Quality 5.3-1
5.3.1 Setting 5.3-1
5.3.2 Environmental Impacts and Mitigation Measures 5.3-4
5.4 Biological Resources 5.4-1
5.4.1 Setting 5.4-1
5.4.2 Environmental Impacts and Mitigation Measures 5.4-4
5.5 Cultural Resources 5.5-1
5.5.1 Setting 5.5-1

5.5.2 Environmental Impacts and Mitigation Measures 5.5-9
5.6 Energy 5.6-1
5.6.1 Setting 5.6-1
5.6.2 Environmental Impacts and Mitigation Measures 5.6-3
5.7 Geology and Soils 5.7-1
5.7.1 Setting 5.7-1
5.7.2 Environmental Impacts and Mitigation Measures 5.7-8
5.8 Greenhouse Gas Emissions 5.8-1
5.8.1 Setting 5.8-1
5.8.2 Environmental Impacts and Mitigation Measures 5.8-3
5.9 Hazards and Hazardous Materials 5.9-1
5.9.1 Setting 5.9-1
5.9.2 Environmental Impacts and Mitigation Measures 5.9-5
5.10 Hydrology and Water Quality 5.10-1
5.10.1 Setting 5.10-1
5.10.2 Environmental Impacts and Mitigation Measures 5.10-5
5.11 Land Use and Planning 5.11-1
5.11.1 Setting 5.11-1
5.11.2 Environmental Impacts and Mitigation Measures 5.11-2
5.12 Mineral Resources 5.12-1
5.12.1 Setting 5.12-1
5.12.2 Environmental Impacts and Mitigation Measures 5.12-2
5.13 Noise 5.13-1
5.13.1 Setting 5.13-1
5.13.2 Environmental Impacts and Mitigation Measures 5.13-3
5.14 Population and Housing 5.14-1
5.14.1 Setting 5.14-1
5.14.2 Environmental Impacts and Mitigation Measures 5.14-2
5.15 Public Services 5.15-1
5.15.1 Setting 5.15-1
5.15.2 Environmental Impacts and Mitigation Measures 5.15-3
5.16 Recreation 5.16-1
5.16.1 Setting 5.16-1
5.16.2 Environmental Impacts and Mitigation Measures 5.16-1
5.17 Transportation 5.17-1
5.17.1 Setting 5.17-1
5.17.2 Environmental Impacts and Mitigation Measures 5.17-4
5.18 Tribal Cultural Resources 5.18-1
5.18.1 Setting 5.18-1
5.18.2 Environmental Impacts and Mitigation Measures 5.18-4
5.19 Utilities and Service Systems 5.19-1
5.19.1 Setting 5.19-1
5.19.2 Environmental Impacts and Mitigation Measures 5.19-5
5.20 Wildfire 5.20-1
5.20.1 Setting 5.20-1
5.20.2 Environmental Impacts and Mitigation Measures 5.20-2
5.21 Corona and Induced Current Effects 5.21-1
5.21.1 Environmental Setting 5.21-1
5.21.2 Environmental Impacts and Assessment 5.21-1

5.22 Mandatory Findings of Significance 5.22-1

6. Mitigation Monitoring and Reporting Program 6-1

7. References 7-1

8. Comments and Comment Responses 8-1

Tables

Table 4-1 Anticipated Personnel and Equipment Required for Project Construction (based on typical estimates) 4-6
Table 4-2 Equipment Expected to be Used During Construction 4-7
Table 4-4 Permits and Approvals Necessary for the Proposed Project 4-9
Table 5.3-1 National and California Ambient Air Quality Standards 5.3-1
Table 5.3-2 Attainment Status for San Francisco Bay Area 5.3-2
Table 5.3-3 Estimated Maximum Daily Construction Emissions (lb/day) 5.3-5
Table 5.5-1 Previously Completed Cultural Resources Reports Within a 0.25-Mile Radius 5.5-3
Table 5.6-1 Energy Sources of Electricity Supplied to Customers (2020 Power Content) 5.6-1
Table 5.6-2 Electricity Consumption for Load Served by SVP (million kWh per year) 5.6-2
Table 5.7-1 Significant Active and Potentially Active Faults within 50 miles of the Proposed Project 5.7-4
Table 5.13-1 Typical Noise Levels for Individual Construction Equipment 5.13-4
Table 5.14-1 Year 2020 Existing Conditions – Population, Housing, and Employment: City of Santa Clara and County of Santa Clara 5.14-1
Table 5.17-1 Existing Local Roadway Conditions 5.17-2
Table 5.19-1 Utility Providers 5.19-1
Table 5.19-2 Landfill Capacities 5.19-2
Table 6-1 Mitigation Monitoring Plan 6-1
Table 8-1 Comments Received on the Proposed Mitigated Negative Declaration 8-1

Figures

Figure 4.1 Homestead Substation Location 4-11
Figure 4.2 Existing Homestead Substation Looking Northeast 4-12
Figure 4.3 Homestead Substation Layout 4-13

List of Acronyms

ACE	Altamont Commuter Express
ADT	Average daily traffic
ANSI	American National Standards Institute
APN	Assessor's parcel number
ARB	Air Resources Board
ATCM	Airborne Toxic Control Measures
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
Cal/EPA	California Environmental Protection Agency
CAP	Climate Action Plan
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
CCJPA	Capitol Corridor Joint Powers Authority
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CGS	California Geological Survey
CIWMB	California Integrated Waste Management Board
CLG	Certified Local Government
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CPRC	California Public Resources Code
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CVC	California Vehicle Code
CWA	Clean Water Act
DHS	Department of Health Services
DOC	Department of Conservation
DPM	Diesel particulate matter
DPR	Department of Pesticide Regulation
DTSC	Department of Toxic Substance Control
EAP	Energy Action Plan
EHC	Environmental Health Criteria
EIR	Environmental Impact Report
EMF	Electric and magnetic fields
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program

GHG	Greenhouse gas
GO	General Order
HFCs	Hydrofluorocarbons
HSWA	Hazardous and Solid Waste Act
HWCL	Hazardous Waste Control Law
IARC	International Agency for Research on Cancer
IBC	International Building Code
ICC	International Code Council
IEEE	Institute of Electrical and Electronic Engineers
IRP	Integrated Resource Plan
IWMB	Integrated Waste Management Board
JPB	Joint Powers Board
LUST	Leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MLD	Most likely descendant
MM	Mitigation measure
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MRDS	Mineral Resources Data Systems
MRR	Mandatory reporting rule
MRZ	Mineral resource zone
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCP	National Contingency Plan
NESC	National Electric Safety Code
NIMS	National Incident Management System
NPDES	National Pollutant Discharge and Elimination System
NPL	National Priorities List
NSH	National Seismic Hazard
NWIC	California Historical Resources Information System, Northwest Information Center
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OMR	Office of Mine Reclamation
PERP	Portable Equipment Registration Program
PFCs	Perfluorocarbons
PGA	Peak ground acceleration
PM10	Particulate matter (less than 10 microns in diameter)
PM2.5	Fine particulate matter (less than 2.5 microns in diameter)
POU	Publicly owned utility
PRC	Public Resources Code
PRMP	Paleontological Resources Management Plan
RCRA	Resource Conservation and Recovery Act of 1976
ROG	Reactive organic gases
ROW	Right-of-way
RPS	Renewables Portfolio Standard
RWF	Regional Wastewater Facility
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act

SBWR	South Bay Water Recycling
SCFD	Santa Clara Fire Department
SCPD	Santa Clara Police Department
SCVWD	Santa Clara Valley Water District
SEMS	Standardized Emergency Management System
SMARA	Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SRRE	Source Reduction Recycling Element
SVP	Silicon Valley Power
SWGS	Solid Waste Generation Study
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic air contaminants
TCRs	Tribal Cultural Resources
TMDL	Total Maximum Daily Load
TWW	Treated Wood Waste
U.S.	U.S. Highway
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
UWW	Utility Wood Waste
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
VTA	Valley Transportation Authority
WDRs	Waste Discharge Requirements
WEAP	Worker environmental awareness program
WHO	World Health Organization

FINAL

Mitigated Negative Declaration/Initial Study for

Silicon Valley Power's Homestead Substation Rebuild Project

1. Mitigated Negative Declaration

1.1 Project Information

Project:	Homestead Substation Rebuild Project City of Santa Clara, Santa Clara County, California
Project Sponsor:	Silicon Valley Power 881 Martin Avenue Santa Clara, CA 95050 (408) 615-6610
General Plan:	Medium Density Residential
Zoning:	B – Public or Quasi Public

1.2 Introduction

Silicon Valley Power (SVP) is proposing the Homestead Substation Rebuild Project (project or proposed project), which would rebuild the existing Homestead Substation within the existing substation site near the intersection of Homestead Road and Kiely Boulevard in the City of Santa Clara. Pursuant to the California Environmental Quality Act (CEQA), SVP has prepared an Initial Study for the proposed project to determine if any significant adverse effects on the environment would result from project implementation. The Initial Study uses the significance criteria outlined in Appendix G of the CEQA Guidelines. If the Initial Study for the Project indicates that a significant adverse impact could occur, SVP would be required to prepare an Environmental Impact Report (EIR).

According to CEQA Guidelines Section 15070 (Decision to Prepare a Negative Declaration or Mitigated Negative Declaration), a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

(b) The initial study identifies potentially significant effects, but:

(1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

Based on the analysis in the Initial Study, it has been determined that all project-related environmental impacts would be less than significant or would be reduced to a less than significant level with the incorporation of feasible mitigation measures. Therefore, adoption of a Mitigated Negative Declaration (MND) will satisfy the requirements of CEQA. The mitigation measures included in this MND are designed to reduce or eliminate the potentially significant environmental impacts described in the Initial Study. Mitigation measures are structured in accordance with the criteria in Section 15370 of the CEQA Guidelines.

1.3 Project Description

SVP is proposing to rebuild the existing Homestead Substation at its current site. The substation property is northwest of the intersection of Kiely Boulevard and Homestead Road in Santa Clara, CA. The substation site is separated from the roadways by existing commercial and multi-family residential buildings and does not front on a public right of way. The project would replace the existing substation in its entirety and would increase substation capacity to deliver 12 kV distribution power within the substation's service area. An existing 60 kV transmission line provides power to the substation; the line would be relocated within the substation property and unneeded poles and conductor would be removed. The packed rock surface of the property would be paved in asphalt after grading. Construction is estimated to take approximately 30 months and would occur in two phases.

1.4 Environmental Determination

The Initial Study was prepared to identify the potential environmental effects resulting from proposed project's implementation, and to evaluate the level of significance of these effects. The Initial Study relies on information provided by SVP, project site reconnaissance by SVPs consultant the Aspen Environmental Group, and information and documents cited in individual resource topic discussions.

Based on the Initial Study analysis, mitigation measures are identified for adoption to ensure that impacts of the proposed project would be less than significant. SVP has agreed to implement all of the recommended mitigation measures as part of the proposed project.

Implementation of the following mitigation measures would avoid potentially significant impacts identified in the Initial Study or reduce them to less than significant levels.

Mitigation Measures for Construction-Phase Air Quality

MM AQ-1 **Implement Basic Construction Air Quality Mitigation.** The project shall ensure that basic construction emissions control measures are implemented as "Best Management Practices," as follows:

- All exposed soil surfaces (e.g., parking areas, staging areas, soil piles, and graded areas) 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 areas to be paved shall be completed as soon as possible. Foundation pads shall be laid as soon as possible after grading.
- 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 regarding idling 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 SVP regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measures for Nesting Birds

MM BIO-1 **Biological Monitoring.** A qualified biologist will be assigned to the project and will monitor the project periodically. The qualified biologist will be the point of contact for any employee or contractor who might inadvertently kill or injure a special-status species or anyone who finds a dead, injured, or entrapped individual. The qualified biologist or biological monitor shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources.

MM BIO-2 **Worker Environmental Awareness Training.** Prior to construction, a construction employee education program will be conducted in reference to all sensitive environmental resources potentially affected by site work (e.g., air quality, biological resources, cultural resources, hydrology and water quality, hazardous materials) and the measures associated with their protection (i.e., mitigation measures and applicable laws and regulations).

MM BIO-3 **Preconstruction Nesting Bird Surveys and Nest Protection.** A preconstruction nesting bird surveys shall be conducted of the site and vicinity by a qualified biologist no more than 7 days before any work activities are performed during the nesting season (February 1 to August 31). A Preconstruction nesting bird survey also shall be required prior to any vegetation removal or trimming that occurs during the nesting season. Surveyors will search for all potential nest types (e.g., ground, cavity, shrub/tree, structural, etc.) and determine whether the nest is active. A nest will be determined to be active if eggs or young are present in the nest. Upon discovery of active nests, Silicon Valley Power's biological monitor will determine if there is need for a buffer or shield to minimize disturbance of the nest. Upon this determination and execution of any required minimization action, work may proceed. The extent of mitigation will be based upon: acclimation

of the species or individual to disturbance, nest type (cavity, tree, ground, etc.), and level and duration of construction activity. If there is a period of 7 or more days during nesting season in which construction does not occur, a new survey shall be undertaken to determine if any nests have been established.

In the unlikely event a special-status or listed species is found nesting nearby, CDFW and USFWS will be notified and the City of Santa Clara will be provided with nest survey results, if requested. When active nests are identified, monitoring for significant disturbance to the birds will be implemented.

Mitigation Measure for Previously Unidentified Historical Resources

MM CR-1 **Worker Training and Management of Unanticipated Discoveries of Historical Resources, Unique Archaeological Resources.** SVP shall conduct a worker environmental awareness program (WEAP) for project personnel who, during the course of project work, might encounter or alter historical resources or important/unique archaeological materials. This program may be combined with any similar required program, such as for biological resources. The WEAP may include a kickoff tailgate session that describes how to identify cultural resources and what to do if an unanticipated discovery is made during construction, presents site avoidance requirements and procedures to be followed if unanticipated cultural resources are discovered during project construction, and includes a discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and SVP policies.

If previously unidentified cultural resources are identified during construction, construction work within 100 feet of the find shall be halted and directed away from the discovery until a Secretary of the Interior qualified archaeologist assesses the significance of the resource. The archaeologist, in consultation with the City of Santa Clara, State Historic Preservation Officer, any interested Tribes, and any other responsible public agency, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be eligible to the National or California Registers, qualify as a unique archaeological resource under California Environmental Quality Act Section 21083.2, or are determined to be tribal cultural resource as defined in Section 21074.

Mitigation Measure for Disturbance of Human Remains

MM CR-2 **Treatment of Human Remains.** Any human remains discovered are to be treated with respect and dignity. Upon discovery of human remains, all work within 50 feet of the discovery area must cease immediately, nothing is to be disturbed, and the area must be secured. The Santa Clara County Coroner's Office must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner of the site is to be called and informed of the discovery. If the remains are located on federal lands, federal land managers, federal law enforcement, and the federal archaeologist must be informed as well, due to complementary jurisdiction issues. It is very important that the suspected remains, and the area around them, are undisturbed and the proper authorities called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are archaeological/historic or of modern origin and if there are any criminal or jurisdictional questions.

After the Coroner has determined the remains are archaeological/historic-era, the Coroner will make recommendations concerning the treatment and disposition of the remains to the person responsible for the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American, he/she shall contact the Native American Heritage Commission (NAHC) by telephone within 24 hours.

The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48 hours to make recommendations to the landowner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC.

According to the California Health and Safety Code, six (6) or more human burials at one (1) location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).

Mitigation Measure for Seismically Induced Liquefaction

MM G-1 **Conduct Geotechnical Investigations for Liquefaction.** Because seismically induced liquefaction-related ground failure has the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for liquefaction to affect the new project poles and substation components at the project site. Where liquefaction hazards are found to exist/verified, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include bigger foundations, installation of flexible bus connections, and/or incorporation of slack in cables to allow ground deformations without damage to structures.

Mitigation Measure for Expansive Soils

MM G-2 **Conduct Geotechnical Investigations for Expansive Soils.** Because expansive soils have the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for expansive soils to affect the new project components at the project site. Where expansive soils are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate impacts from expansive soil could include over-excavation and replacement with engineered fill or soil improvements.

Mitigation Measure for Previously Unidentified Paleontological Resources

MM G-3 **Worker Training and Management of Unanticipated Discoveries of Paleontological Resources.** In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing or other construction activities, a paleontologist must be retained who meets the professional paleontologist qualifications (Society of Vertebrate Paleontology's Standard Procedures, 2010) and has demonstrated experience in carrying paleontological projects to completion. This qualified paleontolo-

gist must develop and implement a Paleontological Resources Management Plan (PRMP) for the project area that meets the standards set forth by the Society of Vertebrate Paleontology (2010). This shall include:

- A Worker Environmental Awareness Program (WEAP) wherein all construction personnel are trained on the processes to be followed upon encountering any fossils.
- A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. Monitors shall be onsite for any disturbance of sediments with high or unknown paleontological sensitivity. Monitors must have demonstrated sufficient paleontological training and field experience to have acceptable knowledge and experience of fossil identification, salvage and collection methods, paleontological techniques, and stratigraphy.
- A recovery plan for significant fossils that provides for the treatment of specimens to the point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.
- A specimen identification, analysis, and curation plan that includes identification to the lowest taxonomic level possible; taxonomic, taphonomic, and biostratigraphic analysis; and curation to the standards of the repository where they will be curated.

Mitigation Measure for Transport, Use, or Disposal of Hazardous Materials

MM HM-1 **Hazardous Substance Control and Emergency Response.** SVP shall implement its hazardous substance control and emergency response. procedures as needed. These procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on site. If it is necessary to store chemicals on site, they shall be managed in accordance with all applicable regulations. Material safety data sheets shall be maintained and kept available on site, as applicable.

No known soil contamination was identified within the project area. In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested and, if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.

All hazardous materials and hazardous wastes shall be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following:

- Proper disposal of potentially contaminated soils.
- Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources.

- Emergency response and reporting procedures to address hazardous material spills.
- Stopping work at that location and contacting the City Fire Department Hazardous Materials Division immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Division.

SVP shall complete its Emergency Action Plan Form as part of project tailboard meetings. The purpose of the form is to gather emergency contact numbers, identify first aid locations and provide other tailboard safety information.

Mitigation Measure for Water Quality

MM HYD-1 **SWPPP or Erosion Control Plan Development and Implementation**. Following project approval, SVP will prepare and implement a SWPPP, if required by State law, or erosion control plan to minimize construction impacts on surface water and groundwater quality. Implementation of the SWPPP or erosion control plan will help stabilize graded areas and reduce erosion and sedimentation. The plan will designate BMPs that will be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, covers, and silt fences, will be installed before the onset of winter rains or any anticipated storm events. Suitable stabilization measures will be used to protect exposed areas during construction activities, as necessary. During construction activities, measures will be in place to prevent contaminant discharge.

The project SWPPP or erosion control plan will include erosion control and sediment transport BMPs to be used during construction. BMPs, where applicable, will be designed by using specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as properly containing stockpiled soils.

Erosion control measures identified will be installed in an area before construction begins during the wet season and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, will remain in place until disturbed areas have stabilized. The plan will be updated during construction as required by the SWRCB.

A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials management and spill response. Compliance with these requirements will be ensured by the on-site construction contractor.

Mitigation Measures for Transportation Impacts

MM T-1 **Construction Traffic Control Plan.** Prior to the start of construction, Silicon Valley Power (SVP) shall prepare and submit a Construction Traffic Control Plan for review and approval to the City of Santa Clara (City) Planning Department for public roads and transportation facilities that would be directly affected by the construction activities and/or would require permits and approvals. SVP shall submit the Construction Traffic Control Plan to the City prior to conducting activities covered in the traffic control permits. The Construction Traffic Control Plan shall include, but not be limited to:

- Identification of any routes that would require lane closures or detours to accommodate material and equipment deliveries and methods to ensure safety.
- Avoidance of peak travel hours (8:00–10:00 a.m. and 4:00–6:00 p.m.) to the maximum extent feasible.
- Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by SVP of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles.
- Plans to coordinate in advance with property owners, if any, that may have limited access to properties.

Mitigation Measure for Unanticipated Tribal Cultural Resources

MM TCR-1 **Management of Unanticipated Tribal Cultural Resources.** During project-level construction, should subsurface tribal cultural resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist and an authorized tribal representative shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5 and Section 21074. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to tribal cultural resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in the tribal cultural resource.

A Mitigation Monitoring and Reporting Program has been prepared to ensure that the mitigation measures presented above are properly implemented (see Section 6). The program describes specific actions required to implement each measure, including information on timing of implementation and monitoring requirements.

Based on the analysis and conclusions of the Initial Study, the impacts of the project as proposed by SVP would be mitigated to less than significant levels with the implementation of the mitigation measures presented herein, which have been incorporated into the proposed project.

2. Environmental Determination

2.1 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" and requiring implementation of mitigation as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture & Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials
☒ Hydrology/Water Quality	☒ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☒ Recreation	☒ Transportation	☒ Tribal Cultural Resources
☒ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

2.2 Environmental Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Kevin Keating, Project Manager
Silicon Valley Power

Date

3. Introduction to the Initial Study

3.1 Proposed Project Overview

Silicon Valley Power (SVP) is proposing to reconstruct the Homestead Substation at its current location in the northwest quadrant of the intersection of Homestead Road and Kiely Boulevard in the City of Santa Clara, California. The project would require the removal of certain structures and equipment at the existing substation and installation of replacement structures and equipment. The project is described in more detail in Section 4.10.

3.2 Environmental Analysis

3.2.1 CEQA Process

This Initial Study has been prepared pursuant to the California Environmental Quality Act (CEQA), the amended State CEQA Guidelines (14 CCR 15000 et seq.). The purpose of the Initial Study is to inform the decision-makers, responsible agencies, and the public of the proposed project, the existing environment that would be affected by the project, the environmental effects that would occur if the project is approved, and, where appropriate, propose mitigation measures that would avoid or reduce environmental effects.

A Mitigated Negative Declaration (MND) has been prepared based on the assessment of potential environmental impacts identified in the Initial Study. All potentially significant impacts associated with the project can be mitigated to be less than significant; therefore, an MND can be adopted by the City of Santa Clara in accordance with Public Resources Code (PRC) Section 21080.

3.2.2 CEQA Lead Agency

The City of Santa Clara is the lead agency for review of the project under CEQA because it must make a decision whether to adopt the MND and to approve or deny the proposed project. The project sponsor is Silicon Valley Power (SVP), a not-for-profit municipal electric utility owned and operated by the City. It began in 1896 as the City of Santa Clara Electric Department, which became Silicon Valley Power in 1998.

3.2.3 Initial Study

The Initial Study presents an analysis of potential effects of the proposed project on the environment. The Initial Study is based on information provided by SVP, project site visits, and additional research.

Construction activities and project operation could have direct and indirect impacts on the environment. The following environmental parameters are addressed based on the potential effects of the proposed project and potential growth-inducing or cumulative effects of the project in combination with other projects:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Corona and Induced Current Effects
- Mandatory Findings of Significance

The Initial Study has been organized into the following sections:

- **Section 3: Introduction.** Provides an introduction and overview describing the proposed project and the CEQA process and identifies key areas of environmental concern.
- **Section 4: Project Description.** Presents the project objectives and provides an in-depth description of the proposed project, including construction details and methods.
- **Section 5: Environmental Analysis and Mitigation.** Includes a description of the existing conditions and analysis of the proposed project's potential environmental impacts, and identifies mitigation measures to reduce potentially significant impacts to less than significant levels.
- **Section 6: Mitigation Monitoring and Reporting Plan.** Includes mitigation measures that SVP must implement as part of the project, actions required to implement these measures, monitoring requirements, and timing of implementation for each measure.
- **Section 7: References.** Lists the sources of information used to prepare the Initial Study.

4. Project Description

4.1 Project Title

Homestead Substation Rebuild Project

4.2 Lead Agency Name and Address

City of Santa Clara
1500 Warburton Avenue
Santa Clara, California 95050

4.3 Lead Agency Contact Person and Phone Number

Kevin Keating, Project Manager
Electric Division Manager
Phone: (408) 615-6611
E-mail: kkeating@santaclaraca.gov

4.4 Project Location

The Homestead Substation property is County Assessor's parcel number (APN) 290-39-064. The property is near the intersection of Homestead Road and Kiely Boulevard, and is separated from these streets by existing development. The site is bound on the north by Saratoga Creek (which is fenced and maintained by the Santa Clara Valley Water District), on the east by commercial buildings fronting on Kiely Boulevard, and on the south and west by multifamily residential buildings fronting on Homestead Road and Creekside Place. The substation site is accessed by driveways extending from both Homestead Road and Kiely Boulevard to the substation site.

The proposed project site is located at 37°20'20"N 121°58'42"W on township and range Mount Diablo Meridian, T. 7 S., R. 1 W, Government Lot L 44.

4.5 Project Sponsor's Name and Address

Silicon Valley Power
1500 Warburton Avenue
Santa Clara, California 95050

4.6 General Plan Designation

Medium Density Residential is the general plan designation for the substation site. The parcel to the north is designated as Parks/Open Space, parcels to the east and south are Neighborhood Mixed Use, and to the west Medium Density Residential. Except for the open space to the north, all properties are built out.

4.7 Zoning

The substation site is zoned B-Public or Quasi Public. The parcel to the north includes Saratoga Creek and has no zoning designation. The parcel to the east is zoned CN Neighborhood Commercial; the two parcels to the south are zoned R3-25D Moderate Density Multiple Dwelling; and six parcels to the west are zoned PD Planned Development. Except for the open space to the north, all properties are built out.

4.8 Surrounding Land Uses and Setting

Land uses within the project vicinity are primarily commercial, residential, and recreational. The dominant features surrounding the project site are retail commercial buildings, a fire station, multi-unit residential buildings and a park. The property is in the northwest quadrant of the intersection of Homestead Road and Kiely Boulevard but is separated from these streets by existing development. Both streets have 4 through traffic lanes with a speed limit of 35 mph. Kiely Boulevard has a central left turn lane but no parking on either side in the project vicinity. Homestead Road includes a central left turn lane as well as bike lanes and parking on both sides. The site is bound on the north by an unpaved Santa Clara Valley Water District access road and Saratoga Creek (the creek bed is approximately 20 feet below the sub-station elevation). Bill Wilson Jr. Park and playground are on the north side of the creek. To the east of the site are commercial buildings fronting on Kiely Boulevard, and on the south side of the site are 2 multifamily apartment buildings accessed from Homestead Road, with parking adjacent to the substation site. To the west the site is adjacent to townhomes on a private road, Creekside Place. Access to the substation is by way of existing driveways from both Homestead Road and Kiely Boulevard, with the primary entrance being from Kiely Boulevard. Santa Clara Fire Station 3 is adjacent to the driveway on Homestead Road.

4.9 Other Public Agencies Whose Approval is Required

The Applicant may be required to obtain the permits from agencies listed in Table 4-4, Permits and Approvals Necessary for the proposed project (see Section 4.10.6).

4.10 Description of the Project

4.10.1 Overview

Much of the equipment in the existing Homestead Substation is at the end of its useful life and spare parts are increasingly difficult to obtain. In addition, the City of Santa Clara plans to increase development densities along portions of El Camino Real and Stevens Creek Boulevard, areas served by the Homestead Substation. This would increase the demand for electrical power delivered through Homestead Substation.

The substation is located behind commercial and residential properties in the northwest quadrant of the intersection of Homestead Road and Kiely Boulevard in the City of Santa Clara. The substation property covers approximately 1.2 acres. The existing substation occupies only a portion of the site, approximately 0.15 acres. Aside from power poles, the tallest parts of the existing substation are dead end structures approximately 26 feet above ground level. The rebuilt substation's dead end structures would be approximately 35 feet above ground level.

It is anticipated that construction would begin in May 2025 and take approximately 30 months to complete. The work would be in two phases, allowing installation of part of the rebuilt substation prior to decommissioning and removing the existing substation equipment. The first phase of the rebuilt substation would be constructed within the western end of the substation property. Once this portion of the rebuilt substation is completed and in service, the old substation would be dismantled and removed, and the second phase of the project would be completed. During construction the existing 60 kV line at the substation will be relocated to temporary poles (known as a shoofly) to accommodate construction activities. The substation site is shown in Figure 4.1 (Homestead Substation Location). Figure 4.2 (Existing Homestead Substation Looking Northeast) provides a photograph of the existing substation. The layout of the completed rebuilt substation is shown in Figure 4.3 (Homestead Substation Layout). All figures are provided at the end of Section 4.10.

4.10.2 Project Objectives

The objectives of the project are to:

- Minimize service disruptions.
- Replace the existing aging substation and increase the capacity of the substation to serve existing and future demand by installing new equipment and infrastructure within the existing substation property, including:
  - 3 new transformers (to feed existing 12 kV distribution circuits) and associated switch gear, control enclosure, switchgear enclosure, support structures, foundations, and appurtenances
  - Reconfigure the existing 60 kV line within the substation property by removing 3 existing wood poles on the south and west sides of the site and transferring the existing transmission line to 3 new steel poles on the north side of the site.
- Remove the existing substation: 2 transformers, switch gear enclosure, and associated support structures, foundations, and equipment
- Pave the rock surface of the property with asphalt and provide appropriate stormwater detention and drainage
- Replace the existing perimeter wall and fencing around the site with a new 13-foot-high wall around the entire site, with metal gates at the existing 2 points of entry.

4.10.3 Project Components

4.10.3.1 Substation

The first phase of the rebuilt Homestead Substation would install one new transformer immediately west of the existing substation. The second phase of the project would remove the existing substation and install two additional transformers and associated equipment east of Phase 1. The complete substation would have a capacity of 115-120 MVA and would include the following equipment:

- Three 60/12 kV low-profile transformer banks
- Buses, circuit breakers, and disconnect switches
- Equipment racks and dead end and transition structures.
- Switchgear inside a metal enclosure
- Control enclosure

Other on-site improvements would include:

- Installing grounding gird and conduit trenches.
- Replacing the existing perimeter fence with approximately 1,000 lineal feet of masonry block screening wall 13 feet high around the entire site, with steel gates at entrance points.
- Removing 3 existing 60 kV wood transmission poles on the south and west sides of the site
- Installing 3 new 60 kV steel transmission poles on the north side of the site and relocating the existing 60 kV conductor to the new poles.
- Paving the entire substation site with asphalt (approximately 54,000 square feet).
- Installing on-site stormwater detention and drainage as needed. (Existing surface drainage is to the north to Saratoga Creek. An existing storm drain crosses the eastern end of the site.)

- Installing photo-cell controlled LED security lighting on the interior of perimeter wall, at gates, and on dead end and bus structures.

4.10.3.2 60 kV Transmission Line

SVP's existing Scott-Homestead 60 kV transmission line provides power to the substation, where it is stepped down for local distribution. The line currently loops into the substation on its northeast side, connecting to buses that connect to the station transformers which reduce the transmission voltage of 60 kV to the distribution voltage of 12 kV. The transmission line then loops out of the substation by way of transmission poles located on the south and west side of the property. The line exits the substation property in its northwest corner and continues from there as the Homestead-Serra 60 kV transmission line. (See Figure 4-1.)

As part of the rebuild project, the configuration of the 60 kV transmission line within the site would be changed. The existing 60 kV transmission line would be relocated to new steel poles on the north side of the property and the wood poles on the south and west side of the site would be removed. The new poles would extend approximately 60 feet above ground level. This new configuration would result in the poles being further from residential properties and would better accommodate the new substation layout. The holes for the steel pole foundations would be completed to a depth of approximately 10 feet. No other changes to the transmission line would be required.

A separate 60 kV transmission line, the Serra-Brokaw line, passes through the substation on poles located on the east side of the substation site. This line does not connect to the substation and would be unaffected by the project.

4.10.3.3 Distribution System

The rebuilt substation would distribute power through existing 12 kV distribution lines already located in local streets. No new distribution lines are planned as part of the project. In the future, as density increases along portions of El Camino Real and Stevens Creek Boulevard, additional distribution circuits may be required to meet increased load demand. The location of any additional circuits is unknown, pending actual need. If required, any new circuits would be located underground in public rights-of-way.

4.10.4 Project Construction Activities

4.10.4.1 Staging Area

The existing substation property is planned to be the primary staging area for construction equipment and new materials, equipment, and parts for the rebuild project. Some equipment and materials may be temporary stored at existing SVP yards prior to delivery to the Homestead site. One example of a potential staging area would be SVP's storage yard located at 1715 Martin Avenue, Santa Clara, CA. The Homestead Substation staging area would include temporary portable bathroom facilities; construction equipment storage during off work hours and weekends; materials storage; and a construction trailer. Access to the site would be from Kiely Boulevard by way of the existing driveway adjacent to an existing commercial building and Saratoga Creek. If needed, secondary access is available from Homestead Road via a driveway adjacent to Santa Clara Fire Station 3. Existing site fencing and walls surrounding the site would secure the area during construction until the new perimeter wall is installed. After project completion, all temporary facilities, debris, and old equipment would be removed. As described below, work would occur in stages, with some stages occurring simultaneously.

4.10.4.2 Substation Work

Site Preparation

Site preparation would include all required earthwork and subsurface work. All work activities would take place within the fenced property. Existing vegetation within the substation property would be removed prior to construction. Overhanging trees outside the substation may be trimmed or removed as necessary to ensure safe operation of the rebuilt substation. SVP would consult with the City arborist regarding tree work. The project would be developed in two phases. A perimeter would be established around the existing substation to protect it during Phase 1 construction. Phase 1 would be built west of the existing substation facility. To establish the Phase 1 work area, the existing overhead line exiting the substation would be temporarily moved to temporary poles (shoo fly) and the existing poles would be removed. The area would be graded to ensure proper drainage. Clean fill material may be required to achieve the planned final grade. A grid for grounding Phase 1 facilities would be installed as well trenches for conduits and foundations for equipment, racks, cabinets, and poles.

Construction

For concrete foundations, concrete mixer trucks capable of carrying 8 yards of concrete would deliver and pour the concrete in forms with appropriate reinforcing bar and conduits in place. Concrete trucks would not be washed out at the site but rather would be rinsed using portable stations established for concrete clean-up.

Once foundations are installed, the Phase 1 substation equipment and appurtenances would be delivered, installed, grounded, and tested. Once Phase 1 is completed and operational, the existing Homestead Substation facilities on the east side of the site would be decommissioned and removed. Phase 2 would follow a similar work plan and sequence as for Phase 1, preparing the balance of the site by grading the site, installing the grounding grid, trenches, and foundations, and installing, testing, and commissioning the equipment that comprise Phase 2.

4.10.4.3 Transmission Line Work

Limited transmission line work would be required within the site to accommodate the new substation layout. No off-site transmission line work is anticipated be required. A truck with trailer would be used to haul the new poles to the site and haul away the old poles. Typical new steel poles would be up to 70 feet long and approximately 24 inches in diameter. Three new steel poles would be installed along the north side of the property. Poles would be either placed directly into augered holes 10 feet deep, with approximately 60 feet of pole above ground level, or set on cast-in-place foundations. Overall, pole heights would be 60 to 65 feet above ground level. The ultimate locations of poles on the north side of the site would be determined in final project design. The conductor currently on existing poles on the south and west of the site would be transferred from the shoo fly to the newly installed poles on the north side of the site.

Unneeded conductor, poles, and associated hardware would be removed from the site. The old conductor would be transported to an SVP yard where it would be prepared for recycling. The wood poles would be pulled and holes left from removing the poles would be backfilled with spoils that may be available from the project site.

4.10.4.4 Distribution Lines

The rebuilt Homestead Substation would continue to use existing distribution lines to supply power to customers in the substation's service area. In the future, if new distribution feeders are required in

response to distribution system load and reliability needs, they would be installed in existing easements in local streets. The locations of and need for any future changes to the distribution system are speculative at this time and are not part of the proposed project.

4.10.4.5 Lighting

For safety and security, photocell-controlled LED lighting would be installed on the interior of the substation perimeter wall and on the bus structures. Fixtures would be downward focused to minimize light spillage offsite. At each gate, a 2-head fixture would be installed, with one head illuminating the area around the exterior of the gate.

4.10.4.6 Water Use

Anticipated water use during construction would be for dust control, concrete cleaning, and basic housekeeping purposes on site. Adjacent buildings, walls, and trees shelter the site from strong winds. However, disturbance of the existing rock ground cover and soil onsite could raise dust. This would be controlled by watering as need. The quantity of water needed is expected to be nominal and would be supplied from existing hydrants and trucked to the site. During substation operation, little water would be required.

4.10.4.7 Construction Workforce and Equipment

The project would be constructed in two phases. The size of the daily workforce will vary depending on the particular construction activities occurring on any one day. Some workers will carpool or arrive in crew trucks. It is estimated that the peak number of construction personnel would rarely exceed 25 workers and traffic to and from the site generated by workers and equipment/materials delivery would not exceed a maximum of approximately 30 trips per day. Most workdays would have a smaller workforce and lower trip generation. Table 4-1, Anticipated Personnel and Equipment Required for Project Construction (based on typical estimates), lists the expected equipment and personnel by construction activity. Not all equipment and personnel may be used during all portions of the activity. This is a preliminary equipment list; other equipment may be identified when project design is finalized or during construction if unexpected conditions require additional equipment.

Table 4-1. Anticipated Personnel and Equipment Required for Project Construction (based on typical estimates)

Activity	People	Quantity of Equipment
Survey	1 to 2	1 Pickup truck
Auger Holes for Wood and Light Duty Poles	3	1 Line truck with auger attachment 1 Pickup truck 1 Backhoe or skid loader
Concrete Pier Foundation Installation	5-6	1 Line truck 1 Backhoe or skid loader 1 Drill rig 1 Crane 1 Water truck 1 Pickup truck 3 Cement trucks
Material Haul	3	1 semi truck with trailer
Pole Delivery	3	1 Pole delivery truck 1 Pickup or light SUV

Table 4-1. Anticipated Personnel and Equipment Required for Project Construction (based on typical estimates)

Activity	People	Quantity of Equipment
Wood and Light-Duty Steel Pole Installation and Distribution Pole Removal (Ground access, per crew; construction would include 2 crews)	5 per crew	2 Crew cab truck 2 Line trucks with bucket and trailer (transports boom and auger) 1 Backhoe or skid loader
Conductor Installation (includes moving distribution to new pole, up to 3 crews may be present during wire stringing activities)	5 per crew	1 Line truck or semi-truck with wire reel 2 Pickup trucks 2 Line truck with bucket/crane 1 Line truck with wire puller 1 Line truck with wire tensioner
Substation Modifications (equipment expected is for each phase of substation construction)	6	1 Line truck with bucket 2 Pickup trucks 1 Material truck

Table 4-2, Equipment Expected to be Used During Construction, describes the anticipated use of the equipment listed in Table 4-1.

Table 4-2. Equipment Expected to be Used During Construction

Equipment	Use
Aerial Lift (or Line Truck with Bucket)	Lifts crew members to make line connections
Auger truck	Drill holes for wood pole installation
Cement mixer/truck	Deliver and pour concrete foundations
Crane	Lifting of heavy equipment and poles into place
Crew-cab truck or pickup truck	Transport personnel
Dump truck	Hauling of dirt around site
Excavator	Excavating for foundations, substructures, and removal of existing concrete structures
Generator set	Power generation for operation of tools
Line truck (with auger, puller, worker-lift bucket, crane/boom, etc.)	Transport, install or remove, poles, conductor, or materials
Mechanics service trucks	Service/repair vehicles and construction equipment
Mixer	Mixing mortar for CMU walls
Reel trailers with reel stands (semi-trailer or truck mounted type)	Haul conductor
Office trailers	Supervision and project meeting activities
Plate compactor	Grading, compact soil
Pump	Dewatering if groundwater is encountered, removal of foundation slurry, and watering for dirt suppression, if necessary
Forklift	Loading and Transport of poles
Roller	Soil compaction and paving
Semi-truck (with trailer)	Haul wire reel
Sweeper/Scrubber	Road cleaning, if necessary
Tensioner (line truck-mounted)	Install conductor
Backhoe or skid loader	Grading, backfilling of holes, loading soil
Water truck	Dust suppression, transport water to concrete foundation locations, water for stabilizing slurry

Table 4-2. Equipment Expected to be Used During Construction

Equipment	Use
Welder	For any welding that may be required
Worker-lift (truck mounted)	Lift workers to perform work on structures

4.10.4.8 Construction Traffic and Circulation

Site access for crews, materials, and equipment would be primarily from Kiely Boulevard via the existing driveway located between Saratoga Creek and the adjacent commercial building. The driveway is approximately 150 feet long between the street and the substation gate. No materials, equipment, or vehicles would be staged in the driveway. Temporary short-term lane closures on some public roads may be required during the 30-month construction period to accommodate delivery of oversized equipment or materials.

4.10.4.9 Vegetation Clearance

The substation ground surface is crushed compacted rock. Trees are located along a portion of the south property line and in the northwest corner of the site. Otherwise, the substation site is free of vegetation. Some tree removal or tree trimming would be required for pole installation and to minimize the risk of fire by providing adequate clearance between conductors, substation equipment, and trees. In general, trees would be avoided where feasible. Trees located below the 60 kV transmission line would need to be trimmed so that they are no taller than about 25 feet to 30 feet above ground. Tree branches that are closer than 5 feet vertically or 10 feet horizontally to any conductor or wire (with or without wind) would be trimmed to meet the minimum required safe clearance.

4.10.4.10 Erosion and Sediment Control and Pollution Prevention

A small, temporary stockpile of excavated dirt from pole hole or foundation excavation may be located onsite. It would be used to backfill the holes left by the removed poles, with the balance either spread on the site or loaded into a truck and transported offsite. Any stockpiles would be located away from Saratoga Creek and sediment controls would be implemented to prevent water or wind disturbance and migration of the earth.

4.10.4.11 Cleanup and Post Construction Restoration

Construction debris, waste, and old equipment would be transported to an SVP Service Center in preparation for reuse, recycling, or disposal. The removed wood poles would be hauled to a Service Center to be reused or transported with other materials for disposal at a licensed Class I or Class II landfill or a composite lined portion of a solid waste landfill, as required. SVP would comply with all laws and regulations regarding the disposal of the existing wood poles and removed equipment.

At the Service Center waste would be stored in approved on site containers or areas and periodically hauled away for recycling or disposal. SVP would conduct a final site survey to document that clean-up activities have been successfully completed as required.

4.10.4.12 Construction Schedule

Construction is expected to take approximately 30 months and is anticipated to be completed by the end of 2028. Construction would start with mobilizing construction equipment, crews, and materials to the substation. In general, construction would begin with site grading and compacting and below grade work (e.g., excavating for the ground grid, holes for poles, and concrete foundations) and would be followed by

installation of racks, transformers, and supporting steel for Phase 1. The control and switch gear enclosures would be installed. This would be followed by or be concurrent with pole installation. Once Phase 1 is operational, Phase 2 would begin with removal of the existing substation followed by a construction process for the remainder of the site similar to that undertaken in Phase 1. When construction is essentially complete, the site would be paved. Construction sequencing and coordination may require short-term power outages as equipment is hooked up. Various types of construction activity may occur simultaneously within the site. Although exempt from the City Noise Ordinance, it is anticipated that to the extent feasible substation work would occur between 7:00 a.m. and 6:00 p.m. on weekdays and 9:00 a.m. and 6:00 p.m. on Saturdays.

4.10.5 Operation and Maintenance

Once the rebuilt Homestead Substation is energized and the old substation equipment is removed, SVP's existing maintenance and operations group would assume inspection, patrol, and maintenance duties. The project would replace an existing substation, and no additional maintenance staff would be required after project implementation. Maintenance would be incorporated into SVP's existing maintenance programs. The operation and maintenance activities at the substation would be similar to SVP's existing activities.

4.10.6 Required Approvals

SVP would obtain permits for the project, as needed. Table 4-4, Permits and Approvals Necessary for the Proposed Project, lists permits and approvals that may be required for project construction.

Table 4-4. Permits and Approvals Necessary for the Proposed Project

Agency	Purpose	Permit, Approval, or Exemption
State		
Regional Water Quality Control Board, Region 2 (San Francisco Bay)	Consistency with state water quality standards	• 401 Certification • Storm Water Construction General Permit 99-08-DWQ • National Pollutant Discharge and Elimination System (NPDES) Permit • Waste Discharge Requirements (WDRs)
Local		
City of Santa Clara	Construction	• Grading and Wall Permits • Traffic Control Plans • Excavation Permit • Tree Removal Permit

4.10.7 Electric and Magnetic Fields Summary

Recognizing that there is public interest and concern regarding potential health effects from exposure to electric and magnetic fields (EMF) from power lines, information is provided here regarding EMF associated with electric utility facilities and the potential effects of the proposed project to public health and safety. Potential health effects from exposure to electric fields from power lines (produced by the existence of an electric charge, such as an electron, ion, or proton, in the volume of space or medium that surrounds it) are typically not of concern since electric fields are effectively shielded by materials such as trees, walls, etc.; therefore, the majority of the following information related to EMF focuses primarily on exposure to magnetic fields (invisible fields created by moving charges) generated by power lines.

However, this Initial Study does not consider magnetic fields in the context of the CEQA and does not make a determination of environmental impact. This is because (a) there is no agreement among scientists that EMF does create a potential health risk, and therefore, (b) there are no defined or adopted CEQA standards for defining health risk from EMF. As a result, EMF information is presented for the benefit of the public and decisionmakers.

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remain inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is not sufficient evidence to conclude that EMF causes cancer. The International Agency for Research on Cancer (IARC), an agency of the World Health Organization (WHO), and the California Department of Health Services (DHS) both classified EMF as a *possible* carcinogen (WHO, 2001; DHS, 2002).

In addition, the 2007 WHO [Environmental Health Criteria (EHC) 238] report concluded that:

- Evidence for a link between Extremely Low Frequency (50–60 Hz) magnetic fields and health risks is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukemia. However, "…virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level ELF magnetic fields and changes in biological function or disease status.…the evidence is not strong enough to be considered causal but sufficiently strong to remain a concern."
- "For other diseases, there is inadequate or no evidence of health effects at low exposure levels."

Currently, there are no applicable regulations related to EMF levels from power lines or substations.

4.10.8 Alternatives

The purpose of an alternatives analysis under CEQA is to identify options that would feasibly attain the project's objectives while reducing the significant environmental impacts resulting from the proposed project. CEQA does not require the inclusion of an alternatives analysis in MNDs because the Initial Study concludes that, with incorporation of any mitigation measures required, there would be no significant adverse impacts resulting from the proposed project (CEQA Guidelines Sections 15063(d) and 15071). Therefore, no alternatives analysis is provided in the Initial Study. Rebuilding at the existing site minimizes the need for new conductor poles and lines and takes advantage of the existing distribution network already established at the site. Any alternative to the rebuilding of the Homestead Substation would require construction of a new substation at a new location, which would be difficult in the city, which is largely built out.

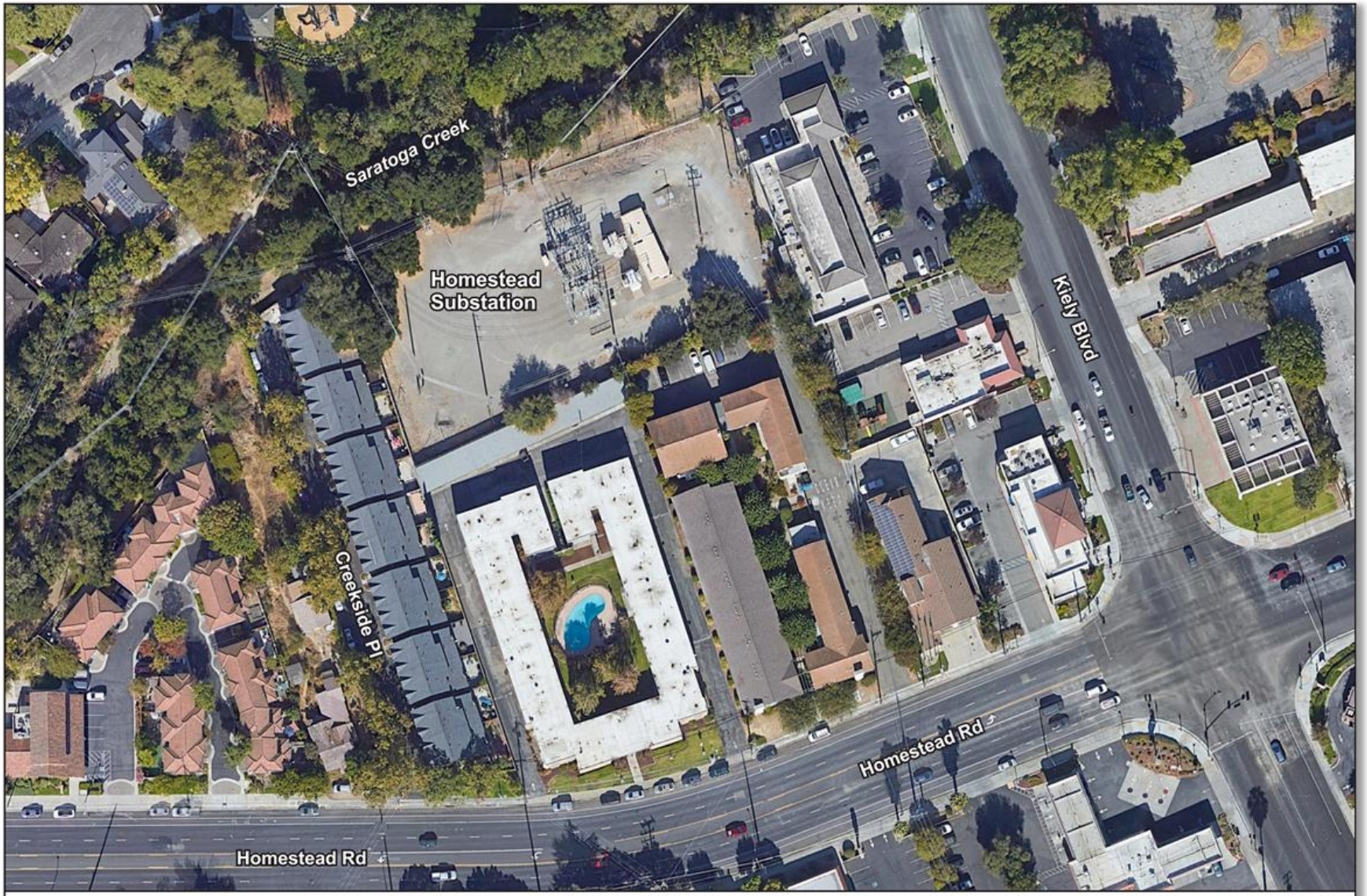
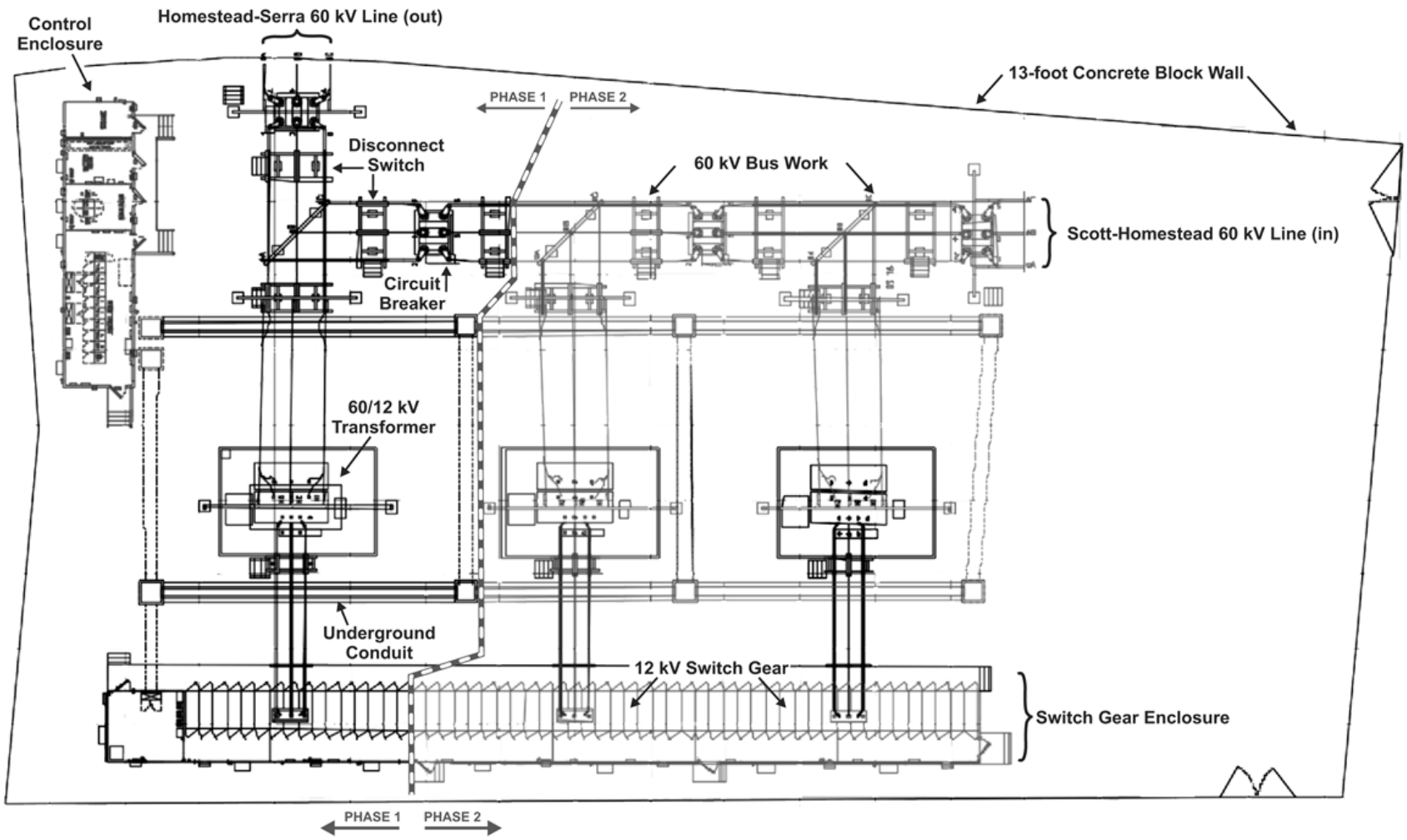


Figure 4.1
Homestead Substation Location

Figure 4.2
Existing Homestead Substation Looking Northeast



Source: Silicon Valley Power

Figure 4.3

Homestead Substation Rebuild Layout

5. Environmental Setting and Environmental Impacts

5.1 Aesthetics

AESTHETICS **Except as provided in Public Resources Code Section 21099, would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.1.1 Setting

Methodology

Visual or aesthetic resources are the visible natural and cultural features of the environment that contribute to the public's enjoyment of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics and potential visibility and the extent that the project's presence would change the visual character and quality of the environment where it would be located.

Visual resources at and near the project site were assessed in the field and potential visual changes due to project activities were evaluated. Visual resources of the project area were investigated based on the following criteria: (1) existing visual quality and scenic attributes of the landscape; (2) location of sensitive receptors in the landscape; (3) assumptions about receptors' concern for scenery and sensitivity to changes in the landscape; (4) the magnitude of visual changes in the landscape that would be brought about by construction and operation of the proposed project; and (5) compliance with State, County, and local policies for visual resources. The evaluation of potential changes in the area's visual character is presented in the following paragraphs.

Existing Landscape Setting and Viewer Characteristics

This section discusses the existing visual character of the region, existing visual quality in the project area; viewer concern, and viewer exposure to the proposed project, leading to a rating of overall visual sensitivity. Also discussed are the existing sources of light and glare within the project area.

Aesthetic Context of the Project and its Vicinity. The proposed project would be located on an existing substation property in an urbanized area of the City of Santa Clara. The site does not front on any public street. The project vicinity is highly developed, with residential properties (apartments and townhouses) on the south and west and a commercial property on the east. To the north, the site abuts an unpaved

access road along Saratoga Creek, with a park area on the north side of the creek. The proposed project site is not located in an area designated as a protected scenic resource and is therefore not subject to scenic protection standards. In addition, the proposed site is not located near an officially designated scenic highway (Caltrans, 2021).

Existing Views of the Project. Views of the proposed project are limited by its location behind existing commercial and residential buildings. Views of the site from the park area north of the site are largely screened by existing vegetation. Existing walls and carports screen most ground level views from residential properties. Portions of the site are visible from second story windows. There are no views from the rear of the commercial property.

Viewer Concern and Sensitivity to Visual Change. Viewer concerns regarding the observed landscape are shaped by expectations of what the viewer will experience and by existing conditions. The project site currently supports a substation in its eastern half and tall transmission line poles along its south and west sides. These visual elements have been long established in the landscape. As well, the surroundings on three sides of the site consist of a densely built environment. The visual change proposed at the site would be largely viewed from second story rear windows of residences. The wall proposed to surround the site would screen ground-level views. The existing transmission poles would be removed and replacement poles would be installed on the north side of the site, more distant from residences. The final project would have steel elements that extend above the height of the wall, but the configuration of the new elements would be less complex than that of the old substation, resulting in a less "stick-built" visual experience. The visual change due to the project would be visible to a limited number of persons and would be consistent with the current visual character of the site and vicinity.

Regulatory Background

This section includes a description of the aesthetic resources' regulatory framework. There are no federal or state regulations or policies related to aesthetic resources are applicable to the project.

Local

City of Santa Clara General Plan. The City's land use policies consider the effects of development to public facilities and infrastructure. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.3.1-P27.** Encourage screening of above-ground utility equipment to minimize visual impacts.
- **Policy 5.3.1-P28.** Encourage undergrounding of new utility lines and utility equipment throughout the City.
- **Policy 5.3.1-P29.** Encourage design of new development to be compatible with, and sensitive to, nearby existing and planned development, consistent with other applicable General Plan policies.

5.1.2 Environmental Impacts and Mitigation Measures

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

NO IMPACT. The flat topography and developed character of this part of the City of Santa Clara does not provide scenic vistas, which typically are views of open spaces or views from elevated topographic positions. The nearest mountains or areas of high elevation that would provide panoramic views that could include the project site are over 5 miles away. Views from these locations would overlook the highly developed urban landscape, within which the rebuilt substation would be indiscernible. The Project would therefore result in no impact to 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. The proposed project would require limited vegetation removal or tree trimming. The project site is not visible from a scenic highway or an historic building. Based on these conditions, there would be no impacts to scenic resources within a State scenic highway.

c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

LESS THAN SIGNIFICANT. The project is located in an urbanized area with primarily residential, commercial, and recreational land uses. A substation already exists on the project property and is an allowed use in the area.

In the short term, the presence of equipment and vehicles may be noticeable to the nearby businesses and residents. However, construction activities would be temporary.

The current ground cover at the substation is crushed stone and the site is largely devoid of vegetation. Vegetation management and tree removal would be limited and would consist of removing a few trees located along the south fence and northwest corner of the substation property and, if necessary, trimming overhanging vegetation. This limited removal would not be a significant change within the overall landscape, due to the urbanized character of area. The Saratoga Creek corridor north of the site is heavily vegetated and would not be affected.

The proposed project would be consistent with applicable zoning, regulations and the applicable policies of the City of Santa Clara General Plan, as noted in Section 5.1.1 and in Section 5.11 (Land Use); thus, the impact would be less than significant.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

LESS THAN SIGNIFICANT. Construction activities would occur during daylight hours and would not include nighttime work that would necessitate the use of lighting within work areas. Surfaces of new structures and enclosures would be non-reflective and would not create glare. Existing nighttime lighting at the site consists of lights mounted on the substation. Adjacent properties also have night lighting, including lighting at the rear of the commercial building fronting on Kiely Boulevard and at the rear of the apartment buildings fronting on Homestead Road. The park north of the site also has extensive night lighting. For safety and security, photocell-controlled LED lighting would be installed on the interior of the new substation perimeter wall and on some bus and dead-end structures. These fixtures would be downward focused to minimize light spillage offsite. A 2-headed fixture would be installed at each gate, with one downward directed head illuminating the area around the exterior of the gate. There is existing lighting from the commercial and residential buildings near the gates. The new lighting would be minimal and would not adversely affect the day or nighttime views in the area, therefore, the impact would be less than significant.

5.2 Agriculture and Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.2.1 Setting

The proposed project is located in a developed area with no agricultural activity or forestry resources at or near the site. The surrounding lands are designated as Urban and Built-Up Land under the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP)(DOC, 2016). The properties in the areas along the proposed project are not under California Land Conservation Act of 1965 (referred to as the Williamson Act) contracts (DOC, 2017).

Regulatory Background

This section includes a description of the agriculture and forestry resources regulatory framework. There are no federal or local regulations associated with agriculture and forestry resources that are relevant to the proposed project.

State

Farmland Mapping and Monitoring Program (FMMP). The FMMP was established in 1982 to identify various categories of farmland throughout California and to assess the location, quantity, and quality of agricultural lands and conversion of these lands to other uses.

Williamson Act. The Williamson Act is intended to help preserve farmland by allowing counties to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use in return for a reduction in assessed property taxes. As stated in Section 51222 of the California Government Code, the minimum acreage requirement for individual parcels to enter into Williamson Act contracts is 100 acres.

5.2.2 Environmental Impacts and Mitigation Measures

a. Would the project 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?

NO IMPACT. The proposed project site and all of the land in the vicinity are designated as Urban and Built-Up Land. Agriculture is not practiced in the area. The proposed project would not result in conversion of Farmland to non-agricultural use.

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

NO IMPACT. The City of Santa Clara does not participate in the Williamson Act. There is no designated zoning for agricultural use, and the City of Santa Clara General Plan does not include an Agriculture Element. The proposed project route would not conflict with zoning for agricultural use.

c. Would the project 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))?

NO IMPACT. The proposed project route is in an urban area and is not forested. The proposed project would not conflict with zoning for forest land, timberland, or timber production.

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

NO IMPACT. The proposed project would not affect any forest land since the proposed project site is located in an urban area that is not forested. There would be no conversion of forest land to non-forest use.

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

NO IMPACT. There is no Farmland, agriculture, or forestland along or near the proposed project. The proposed project would not result in changes in the environment that would result in the conversion to non-agricultural or non-forest uses.

5.3 Air Quality

AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☒	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.3.1 Setting

Air Basin. The project would be in the San Francisco Bay Area air basin in the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates sources of air pollution and the programs to improve air quality in the region. The San Francisco Bay Area air basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range splits resulting in a western coastal gap, the Golden Gate, and an eastern coastal gap, the Carquinez Strait, which allow air to flow in and out of the Bay Area air basin and California's Central Valley (BAAQMD, 2017).

Criteria Air Pollutants. Air quality is determined by measuring ambient concentrations of certain criteria air pollutants. The criteria pollutants are ozone, respirable particulate matter (PM10), fine particulate matter (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Ozone is an example of a secondary pollutant that is not emitted directly from a source (e.g., an automobile tailpipe), but it is formed in the atmosphere by chemical and photochemical reactions. Reactive organic gases (ROG), including volatile organic compounds (VOC), are regulated as precursors to ozone formation.

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (U.S. EPA) have independent authority to develop and establish health-protective ambient air quality standards, although the different legislative and scientific contexts cause some diversity between State and Federal standards currently in effect in California. The monitored levels of the pollutants are compared to the current National and California Ambient Air Quality Standards (NAAQS and CAAQS) to determine degree of existing air quality degradation. The standards currently in effect in California are shown in Table 5.3-1.

Table 5.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone	1-hour 8-hour	0.09 ppm 0.070 ppm	— 0.070 ppm
Respirable Particulate Matter (PM10)	24-hour Annual Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 —

Table 5.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Fine Particulate Matter (PM2.5)	24-hour Annual Mean	— 12 µg/m^3	35 µg/m^3 12.0 µg/m^3
Carbon Monoxide (CO)	1-hour 8-hour	20 ppm 9.0 ppm	35 ppm 9 ppm
Nitrogen Dioxide (NO_2)	1-hour Annual Mean	0.18 ppm 0.030 ppm	0.100 ppm 0.053 ppm
Sulfur Dioxide (SO_2)	1-hour 24-hour Annual Mean	0.25 ppm 0.04 ppm —	0.075 ppm 0.14 ppm 0.030 ppm

Notes: ppm=parts per million; µg/m3= micrograms per cubic meter; "—" =no standard
Source: ARB, 2016.

Ambient Air Quality Attainment Status and Air Quality Plans. The U.S. EPA, ARB, and the local air district classify an area as attainment, unclassified, or nonattainment of a pollutant, and these designations dictate the air quality management planning activities needed make future air pollutant reductions. The classification depends on whether the monitored ambient air quality data show compliance, insufficient data available, or noncompliance with the ambient air quality standards, respectively. Table 5.3-2 summarizes attainment status in the San Francisco Bay Area air basin for the criteria pollutants under both the state and federal standards.

Table 5.3-2. Attainment Status for San Francisco Bay Area

Pollutant	California Designation	Federal Designation
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment
PM10	Nonattainment	Unclassified/Attainment
PM2.5	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: BAAQMD, 2017.

Toxic Air Contaminants. Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another's. TACs do not have ambient air quality standards, but are regulated by the local air districts using a risk-based approach. The project would not be considered a stationary source subject to risk assessment programs. Diesel particulate matter (DPM) is classified as a TAC, and statewide and local programs focus on managing this pollutant through motor vehicle fuels, engine, and tailpipe standards because many toxic compounds adhere to diesel exhaust particles.

Sensitive Receptors. Residential areas, day care centers, hospitals, and schools are some examples of sensitive receptors. The BAAQMD defines sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses (BAAQMD, 2017).

Regulatory Background

U.S. EPA/ARB Off-Road Mobile Sources Emission Reduction Program. The California Clean Air Act mandates that ARB achieve the maximum degree of emission reductions from all off-road mobile sources in order to attain the state ambient air quality standards. Off-road mobile sources include construction equipment. The earliest (Tier 1) standards for large compression-ignition engines used in off-road mobile sources became effective in California in 1996. Since then, the Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California for most engine classes in 2006, and Tier 4 or Tier 4 Interim (4i) standards apply to all off-road diesel engines model year 2012 or newer. These standards address emissions of nitrogen oxides (NOx) and toxic particulate matter from diesel combustion. The California Emission Standards for Off-Road Compression-Ignition Engines are as specified in California Code of Regulations (CCR) Title 13, Division 3, Chapter 9, Article 4, Section 2423.

ARB In-Use Off-Road Diesel-Fueled Fleets Regulation. The regulation for in-use off-road diesel-fueled fleets is designed to reduce NOx and toxic DPM. Depending on the size of the fleet of equipment, the owner must ensure that the average emissions performance of the fleet meets certain statewide standards. In lieu of improving the emissions performance of the fleet, electric systems can be installed to replace diesel equipment in the fleet average calculations. Presently, all equipment owners are subject to a five-minute idling restriction in the rule (13 CCR, Chapter 10, Section 2449).

ARB Portable Equipment Registration Program (PERP). This program allows owners or operators of portable engines and associated equipment commonly used for construction or farming to register their units under a statewide portable program that allows them to operate their equipment throughout California without having to obtain individual permits from local air districts.

ARB Airborne Toxic Control Measures (ATCM). Diesel engines on portable equipment and vehicles are subject to various ATCMs that dictate how diesel sources must be controlled statewide. For example, the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than 5 minutes in any one hour (13 CCR, Chapter 10, Section 2485). Diesel engines used in portable equipment fleets are subject to stringent DPM emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (17 CCR Section 93116).

City of Santa Clara General Plan. The General Plan includes one relevant policy taken from the Air Quality Goals and Policies section, as follows. Air Quality Policy 5.10.2-P6: Require “Best Management Practices” for construction dust abatement.

BAAQMD CEQA Guidelines Thresholds of Significance. The BAAQMD developed the following thresholds as recommendations for use in the CEQA process. For construction-related criteria air pollutant emissions, construction of a project may cause a significant impact if it would:

- Emit more than 54 pounds per day (lb/day) of reactive organic gases (ROG) or volatile organic compounds (VOC);
- Emit more than 54 lb/day of nitrogen oxides (NOx);
- Emit more than 82 lb/day of PM10 from exhaust; or
- Emit more than 52 lb/day of PM2.5 from exhaust.

Similar thresholds exist for a project during operation along with a threshold for localized concentrations of CO greater than 9 ppm (8-hour average) or 20 ppm (1 hour average). For PM10 and PM2.5 related to construction fugitive dust, the BAAQMD recommends that every project should include best management

practices rather than achieve specific fugitive dust emissions thresholds. The basic construction emissions control measures appear in the BAAQMD CEQA Guidelines (BAAQMD, 2017).

5.3.2 Environmental Impacts and Mitigation Measures

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

NO IMPACT. The BAAQMD is the primary agency responsible for managing local air quality and administering other California and federal programs ensuring implementation of the air quality management plan. The 2017 Bay Area Clean Air Plan is the BAAQMD's current plan to achieve state and national ambient air quality standards, comply with California and federal air quality planning requirements, and maintain healthy air in the San Francisco Bay Area.

The BAAQMD recommends evaluating whether local long-range plans: (a) support the primary goals of the 2017 Clean Air Plan; (b) include relevant control measures; and (c) do not interfere with implementation of 2017 Clean Air Plan control measures. The BAAQMD's 2017 Clean Air Plan anticipates that electricity consumption and demand for electricity will increase as a result of economic and demographic growth and due to increased electrification caused by shifting energy demand away from fossil fuels. The proposed project would modify the existing SVP infrastructure to improve the electric transmission system. By improving the delivery of electricity, the project would support the primary goals of the 2017 Clean Air Plan. No control measures from the plan would be directly applicable to the project, and the project would not disrupt or hinder implementation of any plan control measures.

Additionally, a project could be inconsistent with the applicable air quality management plan or attainment plan if it could cause population and/or employment growth or growth in vehicle-miles traveled in excess of the growth forecasts included in the air quality attainment plan. The project would not require any new permanent full-time or part-time staff after construction is complete. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan. No impact would occur, and no mitigation is required.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. The construction-related increase in air pollutant emissions would occur in the regional context of the San Francisco Bay Area air basin that is currently designated as "nonattainment" for ozone, PM10, and PM2.5 (Table 5.3-2, Attainment Status for San Francisco Bay Area).

The thresholds of significance (BAAQMD, 2017) recommended by the BAAQMD define mass emission rates that represent a potentially significant net increase for ozone precursor emissions (NOx or VOC) or exhaust emissions of particulate matter (PM10 and PM2.5). For construction dust, the BAAQMD recommends a qualitative approach emphasizing implementation of effective emissions control measures that avoid causing a cumulatively considerable net increase. The qualitative approach to reducing dust reflects the nature of construction phase emissions that are generally short-term in duration. For this project, construction emissions would cease at the conclusion of construction.

The proposed activities include mobilizing construction equipment, crews, and materials, excavating holes for poles, installing concrete foundations, installing equipment and structures, and paving. These activities during construction would generate emissions at the work area and along the roadways used to access the site. Construction emissions would be caused by exhaust from vehicles and equipment (e.g., ozone precursors [volatile organic compounds and NOx], CO, and particulate matter [PM10 and PM2.5]) and

fugitive dust/particulate matter from ground-disturbing activities. Diesel and gasoline-powered construction equipment at work sites would include trucks for linework, lifts, delivery, concrete, water and work crews, backhoes, loaders, drill rigs, cranes, and small welders, pumps and generators. Outside of work site, exhaust emissions would be caused by vehicles transporting equipment and supplies to the site, trucks removing debris, and workers commuting to and from the work site.

Project-related construction emissions calculations rely on factors from the ARB EMFAC2017 model and other databases embedded in the California Emissions Estimator Model (CalEEMod; v.2020.4.0). The detailed emission calculations are based on the proposed workforce and types of equipment (see Project Description, Section 4.10.4.7, Table 4-1 and Table 4-2). The activity details modeled and the results are summarized in the CalEEMod output files (Aspen, 2022).

Table 5.3-3 shows that with implementation of basic control measures, construction-related criteria air pollutants would not exceed thresholds that indicate cumulatively considerable levels. Therefore, construction of the project would not result in a cumulatively considerable net increase of any criteria pollutants for which the project region in is nonattainment, and the construction impacts with mitigation would be less than significant under this criterion.

Table 5.3-3. Estimated Maximum Daily Construction Emissions (lb/day)

Construction Sequence	NOx	VOC	PM10 (exhaust)	PM2.5 (exhaust)	CO	SO_2
Phase 1, Site Preparation, Grading	17.33	1.84	0.65	0.61	19.52	0.04
Phase 1, Below Grade Work, Installation; Phase 2, Removal of Existing Substation	14.50	1.83	0.55	0.51	19.44	0.04
Phase 2, Installation	14.49	1.83	0.51	0.49	19.37	0.04
Phase 2, Cleanup, Paving	5.62	0.62	0.25	0.23	9.20	0.02
Maximum Daily Construction Emissions	**17.33**	**1.84**	**0.65**	**0.61**	**19.52**	**0.04**
Threshold of Significance	**54**	**54**	**82**	**82**	**None**	**None**

Source: Aspen, 2022.

Concurrent construction of other projects in close proximity to the project could result in increased local air quality impacts for the duration of simultaneous construction activities (Section 5.22). Emissions generated by project construction would be temporary and variable and would be similar in nature to emissions from other typical and nearby construction activities. Simultaneous construction of other cumulative projects in close proximity to the project would be likely to implement general BAAQMD recommendations for minimizing air quality impacts. All activities must comply with BAAQMD rules regarding dust control.

To ensure that project construction-related emissions of dust would not cause a cumulatively considerable net increase, basic construction emissions control strategies are drawn from BAAQMD guidance (BAAQMD, 2017), and these strategies represent “Best Management Practices” consistent with City of Santa Clara air quality policies. The recommended emissions control measures appear in Mitigation Measure AQ-1.

With the implementation of Mitigation Measure AQ-1, construction emissions would not exceed the significance thresholds. With mitigation, construction-related emissions would not substantially contribute to any air quality violation, and this impact would be less than significant

Mitigation Measure for Construction-Phase Air Quality

MM AQ-1 **Implement Basic Construction Air Quality Mitigation.** The project shall ensure that basic construction emissions control measures are implemented as "Best Management Practices," as follows:

- All exposed soil surfaces (e.g., parking areas, staging areas, soil piles, and graded areas) 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 areas to be paved shall be completed as soon as possible. Foundation pads shall be laid as soon as possible after grading.
- 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 regarding idling 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 SVP regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. Operational emissions would be limited to the vehicle and equipment used for periodic maintenance, repair, and inspection of the substation. Monitoring and control functions for the new facilities would be connected to the existing SVP systems by telecommunications. SVP's existing local maintenance and operations group would assume monitoring and control duties and maintenance, inspection, and security roles, as needed. No additional O&M staff would be hired by SVP as a result of the project being put into service. O&M activities would not result in a notable net increase in emissions, and operation would not result in a cumulatively considerable net increase of any criteria pollutant. Accordingly, this impact would be less than significant, and no mitigation would be required during operations.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. Construction would generate toxic air contaminants routinely found in the exhaust of gasoline powered motor vehicles and of diesel-fueled equipment, including diesel particulate matter (DPM). The project would not involve any permanent or stationary sources of air pollution, but construction would temporarily bring construction equipment into the project site. The substation is adjacent to sensitive receptors (residences and parkland). However, the area includes a diverse range of general plan designations within 0.5 miles of the project, including areas with high and medium density residential and community-serving parks/open space.

Residential uses occur on parcels adjacent to the project site and in the project vicinity. Residences on Creekside Place are adjacent to the west side of the project site and are approximately 25 feet from where the proposed substation control enclosure would be erected within the substation wall. The nearest apartment buildings to the south are approximately 40 feet from the substation site boundary, and the apartments are separated from the site by a parking area and parking access road. Apartments to the north are approximately 250 feet from the substation and are separated from the project site by Saratoga Creek and a public park. Apartments to the east are approximately 260 feet from the substation and separated from it by a commercial area and Kiely Boulevard. Additionally, a Montessori school on Kiely Boulevard is near the southeast corner of the site. Project-related work areas would be within 100 feet of these land uses containing sensitive receptors to the south and west of the site.

Short-term emissions associated with construction would occur onsite and along the roadways accessing the work areas, and the activities would be variable in sequence and timing. The proposed activities include mobilizing construction equipment, crews, and materials, grading and compacting with excavation for below grade work, followed by installation of racks, transformers, the switch gear and control enclosures, and supporting steel. Removal of the existing substation would occur between Phase 1 and Phase 2, after which paving would occur. Construction equipment and vehicles would move within the substation property throughout the construction duration of approximately 30 months. Within the overall duration, the emissions would vary and would not occur for long periods; this minimizes the potential that any location would be exposed to substantial pollutant concentrations.

Construction contractors would be required to control dust to avoid creating a nuisance, and the off-road diesel-fueled fleets regulation requires achieving a feasible level of control to minimize diesel exhaust emissions. Implementing "Best Management Practices" would minimize the emissions of pollutants, including dust and DPM or other toxic air contaminants. Mitigation Measure AQ-1, identified under criterion "b" in this section, would control dust, limit equipment idling times, and properly maintain equipment to reduce construction phase emissions to levels below the applicable thresholds of significance. Implementing the best practices identified in the mitigation measure would ensure that receptors would not be exposed to substantial concentrations. Impacts under this criterion would be less than significant with mitigation for construction emissions.

Mitigation Measure for Construction-Phase Air Quality

MM AQ-1 Implement Basic Construction Air Quality Mitigation [see full text under Item (b) above.]

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. During project operations, emissions would result from limited use of vehicles for routine maintenance, repair, and inspection that would not expose sensitive receptors to substantial concentrations of air pollutants. This impact would be less than significant, and no mitigation would be required during operations.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

LESS THAN SIGNIFICANT. The project would not include any sources likely to create objectionable odors. Construction would involve the temporary use of vehicles and construction equipment and materials, such as fuels and lubricants, that may generate intermittent, minor odors. Emissions of this nature would occur briefly during construction and would cease at the end of construction. There would be no notable impact of objectionable odors affecting a substantial number of people. This impact would be less than significant, and no mitigation is required.

5.4 Biological Resources

BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.4.1 Setting

This section describes the existing biological resources that occur in the proposed project area. The project site's ground surface is primarily unvegetated crushed rock. A few trees are located within the site along of the southern property line and in the northwest corner. Additional trees are found north of the site, along Saratoga Creek and in a park north of the creek. The site is a developed/disturbed area that has been physically altered to such an extent that native vegetation communities are no longer present.

Special-Status Plants and Animals

Based on a reconnaissance site visit, due to the absence of suitable habitat in this highly urbanized environment there are no special-status plants or animals in the project area. The ground cover on the project site is primarily crushed rock. Animals that may occur in the vicinity would include urban-adapted birds and mammals such as raccoon, skunk, and opossum. Access to and through the site is impeded by existing fencing.

Nesting Birds

A variety of birds may nest in the vicinity. Nests may be built in trees or other vegetation, on the ground, or on structures near the site. Nesting birds are protected under the Migratory Bird Treaty Act (MBTA) as well as California Fish and Game Code.

Jurisdictional Waters

There are no jurisdictional waters or features within the project site. Saratoga Creek is separated from the site by a Santa Clara Valley Water District (SCVWD) maintenance road outside the site's northern fence line. The creek is maintained by SCVWD as a stormwater drainageway. The project would not encroach on the creek or alter its use.

Regulatory Background

Federal

Federal Endangered Species Act of 1973 (16 U.S.C. § 1538). The federal Endangered Species Act (FESA) designates and provides for protection of threatened and endangered plant and wildlife species and their critical habitat. "Take" of a federally listed species is prohibited without the appropriate permits, which may be obtained through Section 7 consultation (between federal agencies) or a Section 10 Habitat Conservation Plan.

Migratory Bird Treaty Act (16 U.S.C. §§ 703–711). The Migratory Bird Treaty Act (MBTA) of 1918 protects all migratory birds. Birds protected under the MBTA include all native waterfowl, shorebirds, hawks, eagles, owls, doves, and other common birds such as ravens, crows, sparrows, finches, swallows, and others, including their body parts (for example feathers and plumes), active nests, and eggs. A complete list of protected species is found at 50 CFR 10.13. Enforcement of the provisions of the MBTA is the responsibility of USFWS.

Clean Water Act (33 USC §§ 1251-1376). The Clean Water Act (CWA) regulates the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires that an applicant obtain State certification for discharge into waters of the United States. The Regional Water Quality Control Boards administer the certification program in California. Section 404 of the CWA established a permit program, administered by the U.S. Army Corps of Engineers, to regulate the discharge of dredged or fill material into waters of the United States, including wetlands.

State

CEQA Guidelines § 15380. Enacted in 1970, CEQA requires an applicant to fully disclose environmental impacts before issuance of a permit by state and local agencies. State CEQA Guidelines Section 15380(b) articulates the classifications of species to be analyzed under CEQA. In general, impacts to plants or their habitat having a California Rare Plant Rank of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California, but common elsewhere), 2B (plants rare, threatened, or endangered in California), or 3 (plants about which more information is needed — a review list) must be analyzed during preparation of the environmental documents relating to CEQA. According to the California Native Plant Society's (CNPS) Rare Plant Program, species with these California Rare Plant Rank rankings meet the definition of "rare and endangered" under the CEQA Guidelines.

California Endangered Species Act (CESA) (CFGC §§ 2050-2098). Sections 2050-2098 of the California Fish and Game Code (CFGC) prohibit the take of state-listed endangered and threatened species unless specifically authorized by CDFW. The state definition of "take" is to hunt, pursue, catch, capture, or kill a

member of a listed species or attempt to do so. CDFW administers the California Endangered Species Act (CESA) and authorizes take through permits or memoranda of understanding issued under Section 2081 of the CFGC or through a consistency determination issued under Section 2080.1. A consistency determination allows CDFW to authorize a project to proceed if that agency agrees with terms and conditions developed for a federal Biological Opinion and Incidental Take Permit. Section 2090 of CFGC requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species.

Fully Protected Species (CFGC §§ 3511, 4700, 5050, and 5515). CFGC designates certain animal species as "fully protected" under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish). "Take" permits for fully protected species may only be issued for fully protected species that are "covered" species in a Natural Community Conservation Plan (NCCP). Fully protected species in the San Francisco Bay Area include species such as the California clapper rail (*Rallus longirostris obsoletus*), brown pelican (*Pelecanus occidentalis*), and peregrine falcon (*Falco peregrinus*).

CFGC Protection for Birds (CFGC § 3503 et seq.). CFGC Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird. Section 3513 makes it unlawful to take or possess any migratory non-game birds designated under the MBTA, except as provided by rules and regulations adopted under the MBTA

California Species of Special Concern. "Species of Special Concern" is a designation assigned by the CDFW to species it considers at risk. Species of Special Concern meet one or more of the following criteria: (1) is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role; (2) is federally, but not State, listed as threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed; (3) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; (4) has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status. "Species of Special Concern" is an administrative designation intended to focus attention on at-risk species during environmental review and conservation planning. Species of Special Concern should be considered during the environmental review process. CEQA (California Public Resources Code §§ 21000-21177) requires state agencies, local governments, and special districts to evaluate and disclose impacts from "projects" in the state. Because Section 15380 of the CEQA Guidelines defines endangered, rare or threatened species to include species which meet criteria consistent with the criteria required for listing under the federal and/or state endangered species acts regardless of whether such species are formally listed, Species of Special Concern are appropriately considered in the analysis of project impacts.

Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) This act regulates surface water and groundwater and assigns responsibility for implementing federal CWA Section 401. It established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) to protect State waters.

Local

City of Santa Clara General Plan. The City of Santa Clara General Plan was adopted on November 16, 2010, and updated on December 9, 2014. The General Plan goals and policies pertaining to the biological resources are listed below.

Conservation Goals

- Conservation Goal 5.10.1-G1: The protection of fish, wildlife and their habitats, including rare and endangered species.
- Conservation Goal 5.10.1-G2: Conservation and restoration of riparian vegetation and habitat.

Conservation Policies

- Conservation Policy 5.3.1-P10: Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees to be removed as part of the proposal to help increase the urban forest and minimize the heat island effect.
- Conservation Policy 5.10.1-P1: Require environmental review prior to approval of any development with the potential to degrade the habitat of any threatened or endangered species.
- Conservation Policy 5.10.1-P2: Work with Santa Clara Valley Water District and require that new development follow the "Guidelines and Standards for Lands Near Streams" to protect streams and riparian habitats.
- Conservation Policy 5.10.1-P3: Require preservation of all City-designated heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan (see Appendix C of the Arborist Report).
- Conservation Policy 5.10.1-P4: Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.
- Conservation Policy 5.10.1-P5: Encourage enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible.
- Conservation Policy 5.10.1-P11: Require use of native plants and wildlife-compatible non-native plants, when feasible, for landscaping on City property.
- Conservation Policy 5.10.1-P12: Encourage property owners and landscapers to use native plants and wildlife-compatible non-native plants, when feasible.

5.4.2 Environmental Impacts and Mitigation Measures

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 Wildlife or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION.

Special-Status Plants and Wildlife

A review of the California Natural Diversity Data Base (CNDDB) did not identify any occurrences of special status species at or near the project site. As described above, the site is largely devoid of vegetation. The project site is in a highly-developed, built out urban area and does not include suitable habitat for any special-status plant species. Maintained landscape trees, grass, and other vegetation occur in a park area adjacent to the north side of Saratoga Creek. That area is used by adjacent apartment dwellers and others and includes walkways and an area where dogs run.

Nesting Birds

A variety of common birds may nest in the project vicinity and in trees at the edge of the property. Nests may be built in trees or other vegetation or on the ground, or on structures. Birds may also attempt to nest in construction materials or on idle construction equipment.

Nesting birds are protected under the MBTA as well as the CFGC. Further, raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and State regulations. CFGC Section 3503 prohibits the needless destruction of the nest, eggs, or young of any bird covered under the MBTA. Construction disturbance, including tree trimming, tree removal, and other vegetation removal (e.g., shrubs), during the breeding and nesting season (February 15 through August 31) that could adversely impact breeding birds through the removal of potential nesting habitat (e.g., trees and other vegetation), damage to nests and injury or mortality to eggs and young, and disruption of nesting behavior or care of young due to noise and disturbance during construction. Because of the urban environment, nesting birds in the project area would likely be somewhat tolerant of noise, dust, and vibration from construction. However, some construction activities in close proximity to nests may still disturb nesting birds, potentially causing nest failure.

It is expected that any birds nesting in vegetation around the site would be habituated to the urban environment, which includes the presence of lighting, vehicles, equipment, people, and pets. To avoid and minimize impacts to nesting birds, SVP would implement the following mitigation measures: MM BIO-1 (Qualified Biologist), which requires a qualified biologist be assigned to the project and conduct periodic site visits, as well as be the main point of contact for construction if a bird is found injured, entrapped, or dead. MM BIO-2 (Worker Environmental Awareness Training) requires all employees on the project be aware of nesting birds and protocols if an unanticipated biological resource is encountered. MM BIO-3 (Preconstruction Surveys for Nesting Birds) requires preconstruction surveys for nesting birds by a qualified biologist within 7 days prior to the start of construction (a time window that is necessary to ensure that nests are identified) if tree/vegetation trimming or removal and/or construction activities occur during the bird breeding and nesting season (February 15 through August 31). With the implementation of these measures, impacts to nesting birds would be less than significant.

Mitigation Measures for Nesting Birds

MM BIO-1 **Biological Monitoring.** A qualified biologist will be assigned to the project and will monitor the project periodically. The qualified biologist will be the point of contact for any employee or contractor who might inadvertently kill or injure a special-status species or anyone who finds a dead, injured, or entrapped individual. The qualified biologist or biological monitor shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources.

MM BIO-2 **Worker Environmental Awareness Training.** Prior to construction, a construction employee education program will be conducted in reference to all sensitive environmental resources potentially affected by site work (e.g., air quality, biological resources, cultural resources, hydrology and water quality, hazardous materials) and the measures associated with their protection (i.e., mitigation measures and applicable laws and regulations).

MM BIO-3 **Preconstruction Nesting Bird Surveys and Nest Protection.** A preconstruction nesting bird surveys shall be conducted of the site and vicinity by a qualified biologist no more than 7 days before any work activities are performed during the nesting season (February 1 to August 31). A Preconstruction nesting bird survey also shall be required prior to any

vegetation removal or trimming that occurs during the nesting season. Surveyors will search for all potential nest types (e.g., ground, cavity, shrub/tree, structural, etc.) and determine whether the nest is active. A nest will be determined to be active if eggs or young are present in the nest. Upon discovery of active nests, Silicon Valley Power's biological monitor will determine if there is need for a buffer or shield to minimize disturbance of the nest. Upon this determination and execution of any required minimization action, work may proceed. The extent of mitigation will be based upon: acclimation of the species or individual to disturbance, nest type (cavity, tree, ground, etc.), and level and duration of construction activity. If there is a period of 7 or more days during nesting season in which construction does not occur, a new survey shall be undertaken to determine if any nests have been established.

In the unlikely event a special-status or listed species is found nesting nearby, CDFW and USFWS will be notified and the City of Santa Clara will be provided with nest survey results, if requested. When active nests are identified, monitoring for significant disturbance to the birds will be implemented.

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, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

NO IMPACT. Sensitive natural communities are communities that have limited distribution statewide or within a county or region and are often vulnerable to the environmental effects of projects. There is no riparian habitat or other sensitive natural community within the proposed project site. The adjacent Saratoga Creek is maintained by SCVWD as a stormwater drainageway. An unpaved access road separates the site and the creek. The site is not within an identified riparian habitat or other sensitive natural community.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

NO IMPACT. The project area is highly urbanized and no waters or wetlands under the jurisdiction of USACE, RWQCB, or CDFW occur that would be directly affected by the project. Therefore, construction of the proposed project would not result in substantial adverse impacts to jurisdictional waters or 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, or impede the use of wildlife nursery sites?

LESS THAN SIGNIFICANT. The proposed project area is within a highly urbanized area near busy roadways and active land uses. However, landscaped areas and trees in the area provide some habitat for avian foraging and breeding. The site is fenced and is surrounded on three sides by buildings and paving. The north side of the site is adjacent to a maintenance road that separates the site from Saratoga Creek. Any wildlife movement along the creek corridor would not be affected by the project. Wildlife movement through the site itself is blocked by existing fencing. Construction of the project would replace the fencing with a wall, resulting in no change to migratory movement. The project site does not provide wildlife nursery opportunities.

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 limited vegetation on the site would be removed prior to construction. The City of Santa Clara General Plan Conservation Policy 5.10.1-P4 states, "Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way." Land Use Policy 5.3.1-P10 states "Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect." A few of the trees on the edges of the site that would be removed are greater than 36 inches in circumference. As a standard practice, SVP consults with the City Arborist to determine if any removed trees require replacement and the number and location of such plantings elsewhere in the City.

No heritage trees, as listed by the City of Santa Clara General Plan Heritage Tree Appendix 8.10, are present within or immediately adjacent to the proposed project.

By consulting with the City Arborist and executing any required actions, impacts will be less than significant.

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

NO IMPACT. The proposed project area is outside of the Santa Clara Habitat Conservation Plan area.

5.5 Cultural Resources

CULTURAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.5.1 Setting

This section describes the existing cultural resources in the project area and discusses potential impacts associated with the proposed project. Cultural resources are historic and prehistoric archaeological sites, historic-aged architectural or engineering features and structures, and places of traditional cultural significance to Native Americans and other ethnic groups.

Environmental Setting

The project site is in the City of Santa Clara, in an existing urban setting that includes modern commercial buildings, structures, and residential developments.

A summary of the area's cultural setting is provided below and is organized according to Prehistoric and Historic Periods. The Prehistoric Period covers the era prior to sustained European contact (AD 1770s), while the Historic Period covers the time subsequent to that contact. The Ethnohistoric Period is discussed in Section 5.18 (Tribal Cultural Resources).

Prehistory

Paleoindian Period (11,500–4,500 years before present [BP]). Native American occupation and use of the Santa Clara Valley began around 11,000 BP. Natural environmental changes to the Bay Area landscape have occurred since humans' first arrival. Many of the landforms originally available for human habitation in prehistory were inundated as sea levels rose and flooded the Franciscan Valley, burying sites with sediments. Since the earliest systematic studies of central California and Bay Area archaeology in the 1950s, researchers have recognized that a significant portion of the archaeological record is buried in the fans and massive alluvial plains of the lowland valleys (Heizer, 1949, 1950, 1952; Heizer and Cook, 1953; Lillard et al., 1939; Meighan, 1965).

The earliest cultures of the Paleoindian/Early Holocene Period are generally considered to be represented by wide-ranging mobile hunters and gatherers. Throughout California, the Paleoindian sites are most often represented by isolated fluted projectile points, although sites dating to this time period in the Bay Area are sparse. The Coyote Narrows (CA-SCR-177) and the Metcalf Creek Site (CA-SCL-178) sites in the Santa Clara Valley, are considered two of the oldest cultural deposits in the Bay Area. They were discovered in buried soil and dated between 11,000 and 9,500 years old (Fitzgerald and Porcasi, 2003; Hildebrandt, 1983).

Early Horizon (4,500–3,500 BP). The Early Horizon period is characterized by a mobile forager pattern throughout the Bay Area. The milling slab and handstone, as well as a variety of large, wide-stemmed and leaf-shaped projectile points, all emerged during this period. Local Franciscan chert dominated the Early

Holocene components in the Santa Clara Valley. The Metcalf Creek Site (CA-SCL-178) yielded cultural materials as deep as 9 meters below the surface (Fitzgerald and Porcasi, 2003). New groundstone technology and the first cut shell beads in mortuaries signal a more sedentary life, regional symbolic integration, and increased regional trade in the Bay Area, beginning at about 3,500 BP, signaling the end of the Early Horizon.

Middle Horizon (3,500–1,500 BP). Sites of the Middle Horizon period are more common throughout the Santa Clara Valley. These sites usually have deep, stratified deposits that contain large quantities of ash, charcoal, fire-altered rock, fish, bird, and mammal remains. The presence of significant numbers of mortars and pestles suggests a growing reliance upon gathered plant foods as opposed to hunted animal foods. An increase in violence is suggested by the number of Middle Horizon burials found with projectile points embedded in the bones or with other physical markers of violence (Fitzgerald, 1993).

Late Horizon Period (1,500 BP–A.D. 1769). Late Horizon sites are the most numerous and are composed of extensive midden deposits, indicating a more sedentary lifestyle. Important mound/midden sites along the Peninsula margins include the University Village site (CA-SMA-77), the San Bruno Mountain mound (CA-SMA-40), and the Ynigo Mound (CA-SCL-12/H). Several technological and social developments characterize the Late Horizon period such as the introduction of the bow and arrow, which replaced the atlatl and dart. Dietary emphasis on acorns and seeds is prevalent in the materials recovered from excavated sites. This change from hunter-gatherers to an increased sedentary lifestyle is due both to more efficient resource procurement as well as a focus on staple food exploitation, the increased ability to store food at village locations, and the development of increasingly complex social and political systems including long-distance trade networks (Clark, 1989; Levy, 1978).

Ethnography

A review of the ethnographic context for the project area is presented in Section 5.17, Tribal Cultural Resources.

Regional History

The Historic Period of the Santa Clara Valley is generally divided into three major periods: the Spanish period (1777–1821), the Mexican period (1822–1848), and the American period (1848–present).

Spanish Period (A.D. 1777–1821). Spanish explorers in the late 1760s and 1770s were the first Europeans to traverse the Santa Clara Valley. The first party, led by Gaspar de Portola and Father Juan Crespi, arrived in the Alviso–San Jose area in the fall of 1769. The following year, Pedro Fages led another party through the Santa Clara Valley, and in 1772 Fages returned to the same vicinity with Crespi. In 1776, the exploration party of Juan Bautista de Anza and Father Pedro Font traveled through the Santa Clara Valley. The favorable reports of Anza and Font led to the establishment of both Mission Santa Clara and the Pueblo San Jose de Guadalupe in 1777 (Hart, 1987; Winter, 1935; Cutter, 1978).

Mexican Period (A.D. 1822–1848). The 1822 Mexican revolt against Spain followed by the 1834 secularization of the missions changed land ownership patterns in the Santa Clara Valley. The Spanish philosophy of governance was directed at the founding of presidios, missions, and secular towns, with the land held by the Crown. In contrast, the later Mexican policy stressed individual ownership of the land. During the Mexican Period, vast tracts of land, including former mission lands that had reverted to public domain, were granted to individuals (Broek, 1932; Hendry and Bowman, 1940; Hart, 1987).

American Period (A.D. 1848–Present). The population of the Santa Clara Valley began to expand significantly following the 1848 Gold Rush; further population expansion resulted during construction of the railroad to San Francisco in 1864 and the completion of the transcontinental railroad in 1869 (Findlay and

Garaventa, 1983). Throughout the late nineteenth century rancho, pueblo, and mission lands in the Santa Clara Valley were subdivided as the result of population growth, Anglo-American takeover, and the confirmation of property titles. Large cattle ranches were converted to farming of crops; this agricultural land-use pattern continued throughout the American Period. During this period, agricultural experimentation took place. After 1875, the success of many agricultural experiments and expanded access to markets via rail encouraged the development of fruit production in the Santa Clara Valley. From 1875 onward, the expanding fruit market led to innovations in fruit preservation and shipping, including: drying fruit, canning fruit, and shipping fresh fruit in refrigerated cars. This created a wider economic boom that attracted new residents to the Santa Clara Valley (Broek, 1932; Winter, 1935). The City of San Jose served as the County seat, a primary service, financial and social center. Since the 1990s, the agrarian land-use pattern has been displaced by residential housing, commercial centers, and the development of research and manufacturing facilities associated with the electronics industry. The contemporary focus on technological advancement resulted in the designation of the general region as the "Silicon Valley."

Records Search

Aspen cultural resources specialists conducted a desktop cultural resources assessment of the Project area. This background research included a search of the California Historical Resources Information System, Northwest Information Center (NWIC), and online research of historic maps, images, and online archives.

Aspen requested a record search by the NWIC, located at California State University Sonoma, to identify all previously conducted cultural resources surveys and previously recorded cultural resources in the project area. The NWIC search included the Project area and a 0.25-mile buffer around the Project site. The results of the NWIC search were provided on January 12, 2022.

The results of the NWIC records search indicate that 7 previous cultural resources surveys have been completed within the surrounding 0.25-mile area (see Table 5.5-1). None of these previously conducted survey fall within the Project area.

Additionally, the NWIC did not identify any previously recorded cultural resource within the Project area or surrounding 0.25-mile buffer.

Table 5.5-1. Previously Completed Cultural Resources Reports Within a 0.25-Mile Radius

Report No.	Author	Year	Study
S-004292	Joseph C. Winter	1976	Archeological Resources and Impact of Eight Proposed City of Santa Clara Projects, Job #76-10
S-004391	Patricia P. Hickman	1974	An Archaeological Survey of a Portion of Saratoga Creek, Santa Clara County, California
S-028020	Colin I. Busby	2002	Archaeological Monitoring Closure Report, Central Library Project, City of Santa Clara, Santa Clara County, California (letter report)
S-034516	Dana E. Supernowicz	2008	New Tower ("NT") Submission Packet, FCC Form 620, Central Park Relo, CA-4190A
S-034516	Dana E. Supernowicz	2007	Cultural Resources Study of Central Park Relo Project, Sprint/Nextel Site No. CA-4190A, 2655 Homestead Road, Santa Clara, Santa Clara County, California 95051
S-036716	Basin Research Associates	2009	Historic Property Survey Report/Finding of Effect, South Bay Water Recycling (SBWR) Stimulus Projects, Santa Clara Central Park, City of Santa Clara, Santa Clara County

Table 5.5-1. Previously Completed Cultural Resources Reports Within a 0.25-Mile Radius

Report No.	Author	Year	Study
S-043995	Basin Research Associates	2012	Historic Property Survey Report/Finding of Effect, South Bay Water Recycling (SBWR), Kaiser-Kiely Extension Project, City of Santa Clara, Santa Clara County

Native American Heritage Commission and Native American Consultation

A search of the Sacred Lands File database from the Native American Heritage Commission (NAHC), located in Sacramento, California, was conducted. The record search of the NAHC Sacred Lands File was completed with negative results (i.e., no records found). Assembly Bill 52 Native American consultation is discussed in Section 5.18 (Tribal Cultural Resources).

Historic Resource Research

A review was conducted of current and historic maps, photographs, and other resource materials to determine the potential historic significance of the Homestead Substation. Based on this research it was determine that the substation facility and surrounding buildings did not meet State or Federal criteria for listing on historic registers, meaning it does not qualify as a historical resource under CEQA. Specifically, the substation:

1. Does not appear as historically or architecturally unique, has no apparent individually significant engineering features, and does not exhibit any unusual use of materials or building fabric.
2. Has been substantially altered over time since it was originally built at some point between 1956 and 1960. Therefore, it does not have original design integrity.
3. Is not associated with a known historical event of significance, and it does not appear to have risen to a level of important historic significance.
4. Is not known to be associated with any important architect, engineer, contractor, or any individual that appears to have risen to a level of important historic significance.

Regulatory Background

State

State of California CEQA Guidelines. State of California CEQA Guidelines require that historical resources and unique archaeological resources be taken into consideration during the CEQA planning process (CEQA Guidelines §15064.5; PRC §21083.2). If feasible, adverse effects to the significance of historical resources must be avoided or the effects mitigated (CEQA Guidelines §15064.5(b)(4)). State CEQA Guidelines require that all feasible mitigation be undertaken even if the prescribed mitigation does not mitigate impacts to a less than significant level (California Office of Historic Preservation (OHP) 2001b:6).

The term that CEQA uses for significant cultural resources is "historical resource," which is defined as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing, in the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources as defined in PRC Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's lead agency (PRC Section 21084.1 and State CEQA Guidelines §15064.5(a)). A historical resource consists of:

> *Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering,*

> *scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources*

CEQA Guidelines Section 15064.5(a)(3). In accordance with CEQA Guidelines Section 15064.5(b), a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a significant effect on the environment.

CEQA requires a lead agency to determine if an archaeological resource meets the definition of a historical resource, a unique archaeological resource, or neither (CEQA Guidelines §15064.5(c)). Prior to considering potential impacts, the lead agency must determine whether an archaeological resource meets the definition of a historical resource in CEQA Guidelines §15064.5(c)(1). If the archaeological resource meets the definition of a historical resource, then it is treated like any other type of historical resource in accordance with CEQA Guidelines §15126.4. If the archaeological resource does not meet the definition of a historical resource, then the lead agency determines whether it meets the definition of a unique archaeological resource as defined in CEQA Statutes §21083.2(g). In practice, most archaeological sites that meet the definition of a unique archaeological resource also meet the definition of a historical resource. If the archaeological resource meets the definition of a unique archaeological resource, then it must be treated in accordance with CEQA Statutes §21083.2. If the archaeological resource does not meet the definition of a historical resource or a unique archaeological resource, then effects to the resource are not considered significant effects on the environment (CEQA Guidelines §15064.5(c)(4)).

California Health and Safety Code Section 7050.5. California HSC Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the County Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Public Resources Code Section 5097.5. PRC Section 5097.5 provides for the protection of cultural resources. This PRC section prohibits the removal, destruction, injury, or defacement of archaeological features on any lands under the jurisdiction of State or local authorities.

California Register of Historical Resources Criteria of Evaluation. The State of California Historical Resources Commission has designed the California Register for use by State and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register is the authoritative guide to the State's significant historical and archaeological resources.

The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for State historic preservation grant funding, and affords certain protections under CEQA. The following criteria are used when determining if a particular resource has architectural, historical, archaeological, or cultural significance.

- **Criterion 1:** Is the resource associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States?

- **Criterion 2:** Is the resource associated with the lives of persons important to local, California, or national history?
- **Criterion 3:** Does the resource embody the distinctive characteristics of a type, period, region, method of construction, or represent the work of a master or possesses high artistic values?
- **Criterion 4:** Has the resource yielded, or have the potential to yield, information important to the prehistory or history of the local area, California, or the nation?

Local

City of Santa Clara General Plan (2010-2035). The City of Santa Clara's current General Plan provides information to the community to define acceptable development. It is a guide for decisions by the City Council, Planning Commission and other governmental agencies on specific development applications. The current General Plan reports existing conditions, policies and implementation measures for archaeological resources including:

> *Continue to require archeological investigations of all proposed construction sites in sensitive area, such as within 500 feet of a natural watercourse. An archaeological survey shall be prepared by the project applicant to the City's satisfaction, including limited subsurface excavation, and possibly to include a detailed subsurface investigation when important resources cannot be avoided.* (Ongoing, Planning Div., Bldg. Div.)
>
> *Continue to require prior to development, whenever archeological remains are found, a plan for preserving, removing, and recording the find, to be prepared to the City's satisfaction by a professional archeologist.* (Ongoing, Planning Div., Bldg. Div.)

In addition, the following Goals and Policies are identified:

Archaeological and Cultural Resources Goals

- **Goal 5.6.3-G1.** Protection and preservation of cultural resources, as well as archaeological and paleontological sites.
- **Goal 5.6.3-G2.** Appropriate mitigation in the event that human remains, archaeological resources or paleontological resources are discovered during construction activities.

Archaeological and Cultural Resources Policies

- **Policy 5.6.3-P1.** Require that new development avoid or reduce potential impacts to archaeological, paleontological and cultural resources.
- **Policy 5.6.3-P2.** Encourage salvage and preservation of scientifically valuable paleontological or archaeological materials.
- **Policy 5.6.3-P3.** Consult with California Native American tribes prior to considering amendments to the City's General Plan.
- **Policy 5.6.3-P4.** Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and in the Old Quad neighborhood.
- **Policy 5.6.3-P5.** In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeologist/paleontologist.

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

City of Santa Clara Historical and Landmarks Commission. In order to support its historic preservation goals, the City established a Historical and Landmarks Commission and obtained recognition by the State Office of Historic Preservation of the City as a Certified Local Government (CLG). The City currently uses the following tools to evaluate historic resources:

> *The Historical and Landmarks Commission advises the City Council on all matters pertaining to historical landmarks, names, and renaming of streets, museums and the establishment thereof in the City, an in the marking and preservation of historical landmarks and places. As required by the State CLG program, the City has established a list of Architecturally or Historically Significant Properties, which is the foundation for the Commission's recommendations.*
>
> *The Criteria for Local Significance establishes evaluation measures, to ensure that the resource is at least 50 years old and that the property is associated with an important individual or event, an architectural innovation, and/or an archaeological contribution in order to be deemed significant. The City maintains a list of qualified historic consultants for these evaluations.*

Architecturally or Historically Significant Properties refer to prehistoric and historic features, structures, sites, or properties that represent important aspects of the City's heritage. Historic Preservation policies strengthen the City's Historic Preservation Goals, providing direction for changes to historic resources and new development proposed within 100 feet of historic properties in order to evaluate any potential effects on the historic context for the resource. A 100–foot radius, defined as the Area of Historic Sensitivity, is approximately equal to all properties abutting, across the street, and adjacent to abutting properties from a historic resource. This would comprise a little less than a typical City block. Preservation of Santa Clara's long history is also supported by policies that protect archaeological resources, such as relics found in burial sites.

City of Santa Clara Criteria for Local Significance. The Criteria for Local Significance were adopted on April 8, 2004, by the City of Santa Clara City Council. These criteria establish evaluation measures that help to determine significance for properties not yet included on the historic list. Any building, site, or property in the City that is 50 years old or older and meets certain criteria of architectural, cultural, historical, geographical, or archeological significance is potentially eligible. As buildings and other resources age, additional properties will be added to the inventory. In order to accomplish this, a property owner can apply to have their property listed as a historic resource, or the City can nominate properties. The Historical and Landmarks Commission evaluates these applications and forwards a recommendation to the City council. Updates to the Historic Preservation and Resource Inventory require an amendment to the General Plan.

- **Criteria for Historical or Cultural Significance**. To be historically or culturally significant, a property must meet at least one of the following criteria:
  1. *The site, building or property has character, interest, integrity and reflects the heritage and cultural development of the city, region, State, or nation.*
  2. *The property is associated with a historical event.*
  3. *The property is associated with an important individual or group who contributed in a significant way to the political, social and/or cultural life of the community.*

4. *The property is associated with a significant industrial, institutional, commercial, agricultural, or transportation activity.*
5. *A building's direct association with broad patterns of local area history, including development and settlement patterns, early or important transportation routes or social, political, or economic trends and activities.*
6. *Included is the recognition of urban street pattern and infrastructure.*
7. *A notable historical relationship between a site, building, or property's site and its immediate environment, including original native trees, topographical features, outbuildings or agricultural setting.*

- **Criteria for Architectural Significance.** To be architecturally significant, a property must meet at least one of the following criteria:

1. *The property characterizes an architectural style associated with a particular era and/or ethnic group.*
2. *The property is identified with a particular architect, master builder or craftsman.*
3. *The property is architecturally unique or innovative.*
4. *The property has a strong or unique relationship to other areas potentially eligible for preservation because of architectural significance.*
5. *The property has a visual symbolic meaning or appeal for the community.*
6. *A building's unique or uncommon building materials, or its historically early or innovative method of construction or assembly.*
7. *A building's notable or special attributes of an aesthetic or functional nature. These may include massing, proportion, materials, details, fenestration, ornamentation, artwork or functional layout.*

- **Criteria for Geographic Significance.** To be geographically significant, a property must meet at least one of the following criteria:

1. *A neighborhood, group or unique area directly associated with broad patterns of local area history.*
2. *A building's continuity and compatibility with adjacent buildings and/or visual contribution to a group of similar buildings.*
3. *An intact, historical landscape or landscape features associated with an existing building.*
4. *A notable use of landscaping design in conjunction with an existing building.*

- **Criteria for Archaeological Significance.** For the purposes of CEQA, an "important archaeological resource" is one which:

1. *Is associated with an event or person of:*
2. *Recognized significance in California or American history, or*
3. *Recognized scientific importance in prehistory.*
4. *Can provide information, which is both of demonstrable public interest, and useful in addressing scientifically consequential and reasonable or archaeological research questions;*
5. *Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;*
6. *Is at least 100 years old and possesses substantial stratigraphic integrity; or*
7. *Involves important research questions that historical research has shown can be answered only with archaeological methods.*

5.5.2 Environmental Impacts and Mitigation Measures

a. Would the project cause a substantial adverse change in the significance of an historical resource pursuant to §15064.5 [§15064.5 generally defines* historical resource *under CEQA]?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Homestead Substation was built in the mid-1970s. Subsequently, as needed, various pieces of equipment have been replaced. Because the substation is approximately 50 years old, it has the potential to be considered an historic resource. However, an evaluation of the site and substation based on historic records has concluded that the facility does not meet the established criteria to be considered as an historic resource eligible for inclusion on the State or Federal Register of Historic Places, meaning it is not considered a historical resource under CEQA. Likewise, no known prehistoric or historic aged archaeological resources have been identified as being present at or near the project area. Although no known historical resources have been identified within the area, there remains the possibility that presently unidentified historical resources exist below the ground surface that could be discovered and damaged or destroyed during ground disturbing work, which would constitute a significant impact absent mitigation. Implementation of mitigation measure MM CR-1 would evaluate and protect unanticipated discoveries of historical resources or tribal cultural resources, thereby reducing this impact to less than significant.

Mitigation Measure for Previously Unidentified Historical Resources

MM CR-1 **Worker Training and Management of Unanticipated Discoveries of Historical Resources, Unique Archaeological Resources.** SVP shall conduct a worker environmental awareness program (WEAP) for project personnel who, during the course of project work, might encounter or alter historical resources or important/unique archaeological materials. This program may be combined with any similar required program, such as for biological resources. The WEAP may include a kickoff tailgate session that describes how to identify cultural resources and what to do if an unanticipated discovery is made during construction, presents site avoidance requirements and procedures to be followed if unanticipated cultural resources are discovered during project construction, and includes a discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and SVP policies.

If previously unidentified cultural resources are identified during construction, construction work within 100 feet of the find shall be halted and directed away from the discovery until a Secretary of the Interior qualified archaeologist assesses the significance of the resource. The archaeologist, in consultation with the City of Santa Clara, State Historic Preservation Officer, any interested Tribes, and any other responsible public agency, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be eligible to the National or California Registers, qualify as a unique archaeological resource under California Environmental Quality Act Section 21083.2, or are determined to be tribal cultural resource as defined in Section 21074.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Although no known archaeological resources have been previously identified within the project area, there remains the possibility that presently unidentified archaeological resources exist below the ground surface that could be discovered and damaged or destroyed during ground disturbing work, which would constitute a significant impact absent mitigation.

Implementation of mitigation measure MM CR-1 would evaluate and protect unanticipated discoveries of archaeological resources, thereby reducing this potential impact to a less than significant level.

Mitigation Measure for Previously Unidentified Archaeological Resources

MM CR-1 **Worker Training and Management of Unanticipated Discoveries of Historical Resources, Unique Archaeological Resources.** [see full text under Item (a) above.]

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

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. There is no indication that human remains are present within the project area. Background archival research failed to find any potential for human remains (e.g., existence of formal cemeteries) in the area. The limited nature of the proposed ground disturbance makes it unlikely that human remains would be unearthed during construction. However, it is possible that previously unknown human remains could be discovered and damaged or destroyed during ground disturbance, which would constitute a significant impact absent mitigation. Implementation of mitigation measure MM CR-2**,** which requires evaluation, protection, and appropriate disposition of human remains, would reduce this potential impact to a less than significant level.

Mitigation Measure for Disturbance of Human Remains

MM CR-2 **Treatment of Human Remains.** Any human remains discovered are to be treated with respect and dignity. Upon discovery of human remains, all work within 50 feet of the discovery area must cease immediately, nothing is to be disturbed, and the area must be secured. The Santa Clara County Coroner's Office must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner of the site is to be called and informed of the discovery. If the remains are located on federal lands, federal land managers, federal law enforcement, and the federal archaeologist must be informed as well, due to complementary jurisdiction issues. It is very important that the suspected remains, and the area around them, are undisturbed and the proper authorities called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are archaeological/historic or of modern origin and if there are any criminal or jurisdictional questions.

After the Coroner has determined the remains are archaeological/historic-era, the Coroner will make recommendations concerning the treatment and disposition of the remains to the person responsible for the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American, he/she shall contact the Native American Heritage Commission (NAHC) by telephone within 24 hours.

The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48 hours to make recommendations to the landowner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC.

According to the California Health and Safety Code, six (6) or more human burials at one (1) location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).

5.6 Energy

ENERGY Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.6.1 Setting

The proposed project would rebuild and operate a 60/12 kV substation, replacing an existing substation on the same property. Silicon Valley Power is an enterprise of the City of Santa Clara and serves as Santa Clara's municipal electric utility. On a not-for-profit basis, Silicon Valley Power owns power generation facilities, has investments in joint ventures that produce electric power, and trades power on the open market. These efforts are directed toward ensuring its retail electricity customers (the citizens, organizations, and businesses of the City of Santa Clara) a highly reliable source of electric power at low, stable rates (City of Santa Clara, 2020).

The energy sources that make up the mix of power supplied to SVP's customers, relative to the 2020 California power mix, are summarized from utility-specific Power Content Label data gathered by the California Energy Commission shown in Table 5.6-1 (CEC, 2022a).

Table 5.6-1. Energy Sources of Electricity Supplied to Customers (2020 Power Content)

Energy Resources	Santa Clara Residential Mix	Santa Clara Non-Residential Mix	2020 California Power Mix
Eligible Renewable	**40.2%**	**31.7%**	**33.1%**
Biomass & biowaste	0%	2.6%	2.5%
Geothermal	0%	8.1%	4.9%
Eligible hydroelectric	0%	8.8%	1.4%
Solar	11.1%	0%	13.2%
Wind	29.1%	12.2%	11.1%
Coal	**0%**	**0%**	**2.7%**
Large Hydroelectric	**59.8%**	**12.2%**	**12.2%**
Natural Gas	**0%**	**18.4%**	**37.1%**
Nuclear	**0%**	**0%**	**9.3%**
Other	**0%**	**0%**	**0.2%**
Unspecified sources of power*	**0%**	**37.6%**	**5.4%**
Total	**100%**	**100%**	**100%**

*"Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
Source: CEC 2022a, 2020 Power Content Label for SVP.

For recent years including 2020, the average annual electricity consumption served to SVP customers has grown to approximately 3,723 million kilowatt-hours (kWh). Table 5.6-2 shows the baseline electricity consumption by the SVP loads over the prior 5 years, separated by customer classes.

Table 5.6-2. Electricity Consumption for Load Served by SVP (million kWh per year)

Sector, Served by SVP	2016	2017	2018	2019	2020
Ag & Water Pump	0.03	0.03	0.03	0.08	0.10
Commercial Building	2,216.69	2,332.19	2,393.16	2,437.06	2,547.24
Commercial Other	42.34	41.00	41.52	43.80	44.25
Industry	911.67	896.16	862.57	821.66	816.73
Mining & Construction	19.14	18.76	24.74	35.63	46.50
Residential	222.21	235.64	226.01	234.49	264.73
Streetlight	4.30	4.30	3.50	3.00	3.00
SVP Total Usage	**3,416.38**	**3,528.08**	**3,551.53**	**3,575.73**	**3,722.54**

Note: Usage expressed in millions of kWh (one million kWh equals one gigawatt-hour or GWh).
Source: CEC, 2022b; Electricity Consumption by Entity.

Regulatory Background

Energy Action Plan and Loading Order. California has mandated and implemented aggressive energy-use reduction programs for electricity and other resources. In 2003, California's first Energy Action Plan (EAP) established a high-level, coherent approach to meeting California's electricity and natural gas needs and set forth the "loading order" to address California's future energy needs. The "loading order" established that the state, in meeting its energy needs, would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply (CPUC, 2008). Since that time, the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) have overseen the plans, policies, and programs for prioritizing the preferred resources, including energy efficiency and renewable energy.

California's Renewables Portfolio Standard (RPS). Electric utilities in California must procure a minimum quantity of the electricity sales from eligible renewable energy resources as specified by RPS requirements. The most-recent update to the RPS targets was set forth in 2018 with the "100 Percent Clean Energy Act of 2018" [Senate Bill 100 (SB 100)], which establishes the policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers by December 31, 2045. SB 100 requires the CPUC and CEC to ensure that implementation of this policy does not cause or contribute to greenhouse gas emissions increases elsewhere in the western grid.

Integrated Resource Planning. An Integrated Resource Plan (IRP) is an electricity system planning document that lays out the energy resource needs, policy goals, physical and operational constraints, and the general priorities or proposed resource choices of an electric utility, including customer-side preferred resources. Through Senate Bill 350 (De León, Chapter 547, Statutes of 2015) (SB 350), the publicly owned utilities (POU) such as SVP must adopt and file an IRP that is subject to a review by the CEC for consistency with statewide targets for energy efficiency, renewable resources, and greenhouse gas emissions reductions.

State CEQA Guidelines. The California Natural Resources Agency adopted certain amendments to the State CEQA Guidelines effective in 2019, to change how CEQA Lead Agencies consider the environmental impacts of energy use. CEQA Guidelines Section 15126.2(b) and Appendix F require analysis of a project's energy use, in order to assure that energy implications are considered in project decisions. CEQA requires a discussion of the potential environmental effects of energy resources used by projects, with particular emphasis on avoiding or reducing the "wasteful, inefficient, and unnecessary consumption of energy" (see Public Resources Code section 21100(b)(3)).

5.6.2 Environmental Impacts and Mitigation Measures

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

LESS THAN SIGNIFICANT. With the proposed project, SVP would rebuild and operate Homestead Substation. An objective of the proposed project is to respond to the growth of electrical load of SVP's customers. The proposed project would achieve this objective by facilitating an increase in the capacity of SVP's transmission system to transfer electrical power to its customers.

Construction

LESS THAN SIGNIFICANT. Construction activity associated with the proposed project would require the consumption of fossil fuel resources, for example diesel fuel and gasoline to power the off-road construction equipment and construction vehicles. Additionally, construction would require the manufacture and delivery of new equipment and materials, which would require energy use. Depending on materials, some of the debris to be removed as part of the project would be salvageable and recyclable.

Operation and Maintenance

NO IMPACT. Operations, including inspection, patrol, and maintenance, of the proposed project components would also require use of fossil fuel resources. However, no new crews would be added by the project, and maintenance would be incorporated to SVP's existing maintenance programs. The operation and maintenance activities would be similar to SVP's existing activities at the substation would not cause a change in the consumption or use of energy resources.

The energy used by the proposed project during construction would not be wasteful, inefficient, or unnecessary in light of the new facilities that would increase capacity and system reliability, and no potentially significant environmental impact would occur due to the direct or indirect energy consumption of the proposed project.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

LESS THAN SIGNIFICANT. The proposed project would rebuild the Homestead Substation, change the configuration of the existing 60 kV transmission line, and connect to existing 12 kV distribution lines already located in local streets. The project would replace the aging substation and increase the capacity of the substation to serve existing and future demand.

The 2018 revised IRP shows that the SVP system had a peak load of 586 MW on September 1, 2017 (SVP, 2019). Since 2011, SVP had seen a steady 2 to 3 percent increase in demand, until 2015-2017 when the average growth increased to 5 percent or more each year. With recent load growth of 5 to 7 percent and increasing demand from data centers, SVP plans to increase the capacity of its existing system (SVP, 2019). SVP identifies the proposed project as a distribution project for implementation to increase the capacity of the transformer bank stations. By increasing the capacity of the substation, the project would serve existing and future demand from California's end users.

The proposed project would not conflict with any state or local plan for prioritizing renewable energy or energy efficiency. This impact would be less than significant, and no mitigation is required.

5.7 Geology and Soils

GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic groundshaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d. Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2019), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.7.1 Setting

This section describes geology, soils, and seismic conditions and analyzes environmental impacts related to geologic and seismic hazards that could result from the implementation of the proposed project. The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid any adverse impacts anticipated from Project construction and operation. In addition, existing laws and regulations relevant to geologic and seismic hazards are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with the implementation of the project.

Baseline geologic, seismic, and soils information were collected for the project site and surrounding area from published and unpublished literature, GIS data, and online sources. Data sources included geologic literature from the U.S. Geological Survey and California Geological Survey, and other readily available online reference materials. The study area was defined as the project site and the areas immediately adjacent to the proposed project for most geologic and soils issue areas with the exception that the study area related to seismically induced ground shaking includes significant regional active and potentially active faults within 50 miles of the proposed project.

Paleontological resources include fossil plants and animals, and other evidence of past life, such as preserved animal tracks and burrows, and can include whole geologic units that are documented as containing sensitive and unique paleontological remains. Data provided by fossils contribute to proper stratigraphic interpretations, paleoenvironmental and paleoclimatic reconstructions, and to understanding evolutionary processes.

Regional Geologic Setting

The project site is located in the Santa Clara Valley, a relatively flat, elongate alluvial basin. The Santa Clara Valley is bordered on the west and southwest by the Santa Cruz Mountains and on the east by the Diablo Mountain Range. The San Francisco Bay borders the Santa Clara Valley to the north, west, and east along its shorelines. The average slope of the valley floor ranges from nearly flat to about 2 percent grade, with the surrounding hillsides having steeper grades. (City of Santa Clara, 2011)

The Santa Clara Valley is characterized by ridges and valleys and by strongly deformed sedimentary and metamorphic rocks of the Franciscan Complex and sediments deposited by a series of merging alluvial fans formed by streams that drain the adjacent mountains during recent geologic times. The area's groundwater aquifers occur in the alluvial sediments. The alluvial deposits in the Santa Clara Valley derived from the Diablo Range and Santa Cruz Mountains. In the north-central area of the Santa Clara Valley, the alluvial deposits are interbedded with bay and lacustrine deposits. Soil types in the area include clay (low-lying central areas), loam and gravelly loam (northern area of the Santa Clara Valley), and eroded rock clay loam (foothills). (City of Santa Clara, 2011)

Local Geology

Most of the City of Santa Clara is located on a gently sloping area of the valley floor in the north-central portion of the Santa Clara Valley. The City is situated on alluvial fan deposits consisting of gravel, sand and finer sediments. Natural levee deposits consisting of silt and clay are located along the City's major streams. Man-made engineered levees have been constructed over many but not all of the natural levee deposits for flood control. (City of Santa Clara, 2011) The project site is mapped as underlain by alluvial surficial sediments consisting of alluvial gravel, sand, silt, and clay and represents younger stream alluvium in alluvial fan deposits (Dibblee and Minch, 2007).

Artificial Fill

Although not mapped at the project site or immediate vicinity (Dibblee and Minch, 2007), artificial fill, often referred to as undocumented or man-made fill, has been placed throughout the City of Santa Clara in developed areas and likely underlies portions of the project. Generally, artificial fill is comprised varying amounts of sand, clay, and gravel, and may have local areas of man-made debris such as lumber, concrete and brick fragments, and industrial slag materials in areas of undocumented or very old fill. Consistency of the clays range from soft to very stiff, and density of the sands range from very loose to medium dense. The artificial fills in the City of Santa Clara include materials that were placed to fill in naturally low areas, to create building pads and roadways, and to construct landfills. In some cases, older, non-engineered fills have been placed in the City of Santa Clara without standards for fill materials or compaction. Building on non-engineered fills can result in the excessive settlement of structures, pavements, and utilities. However, artificial fills placed using current engineering practices would avoid impacts from excessive or differential settlement. (City of Santa Clara, 2011)

Soils

Soils within the project area reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of human modification. The project site is underlain by two soil associations, the Urban Land–Clear Lake complex, and the Urban Land–Campbell complex (NRCS, 2022). The site is primarily underlain by the Urban Land–Clear Lake complex, with a narrow band of the Urban-and Campbell complex along the southern edge of the site. Both soils consist of disturbed/human transported material and soil formed in alluvium derived from metamorphic, sedimentary, and metavolcanic rocks (NRCS, 2022).

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variations in soil moisture content. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Such soil conditions can affect the structural integrity of buildings and other structures. Soils with moderate to high shrink-swell potential would be classified as expansive soils. Expansion potential is of the Clear Lake and Campbell components of the soils underlying the project site range from high to very high (NRCS, 2022).

Weak (loose or poorly consolidated) soils can compress, collapse, or spread laterally under the weight of buildings and fill, causing settlement relative to the thickness of the weak soil. Usually, the thickness of weak soil will vary and differential settlement will occur. Weak soils also tend to amplify shaking during an earthquake, and can be susceptible to liquefaction, as discussed further in sections below. (City of Santa Clara, 2011) According to hazard mapping compiled by the County of Santa Clara (2012), only soils near the Bay at the City's northernmost edge are identified as compressible.

Potential soil erosion hazards vary depending on the use, conditions, and textures of the soils. The properties of soil that influence erosion by rainfall and runoff are those that affect the infiltration capacity of a soil, and those that affect the resistance of a soil to detachment and being carried away by falling or flowing water. Additionally, soils on steeper slopes would be more susceptible to erosion due to the effects of increased surface flow (runoff) on slopes where there is little time for water to infiltrate before runoff occurs. Soils containing high percentages of fine sands and silt and that are low in density, are generally the most erodible. With increasing clay and organic matter content of these soils, the potential for erosion decreases. Clays act as a binder to soil particles, thus reducing the potential for erosion. Soil erosion hazards are moderate for both wind and water at the project site (NRCS, 2022).

Slope Stability

Important factors that affect the slope stability of an area include the steepness of the slope, the relative strength of the underlying rock material, and the thickness and cohesion of the overlying colluvium and alluvium. The steeper the slope and/or the less strong the rock, the more likely the area is susceptible to landslides. The steeper the slope and the thicker the colluvium, the more likely the area is susceptible to debris flows. Another indication of unstable slopes is the presence of old or recent landslides or debris flows.

The project site, located in the City of Santa Clara is on the gently sloping and nearly flat valley floor, is a flat graded parcel and would not be subject to landslides. According to landslide hazard mapping compiled by the County of Santa Clara (2012), the City of Santa Clara is not within a landslide hazard zone and the CGS does not map and any landslide hazard zones within the city or at or near the project site (CGS, 2022)

Seismicity

Seismic faults can be classified as historically active, active, potentially active, or inactive, based on the following criteria (CGS, 2018):

- Faults that have generated earthquakes accompanied by surface rupture during historic time (approximately the last 200 years) and faults that exhibit aseismic fault creep are defined as Historically Active.
- Faults that show geologic evidence of movement within Holocene time (approximately the last 11,000 years) are defined as Active.
- Faults that show geologic evidence of movement during the Quaternary (approximately the last 1.6 million years) are defined as Potentially Active.
- Faults that show direct geologic evidence of inactivity during all of Quaternary time or longer are classified as Inactive.

Although it is difficult to quantify the probability that an earthquake will occur on a specific fault, this classification assumes that if a fault has moved during the Holocene epoch, it is likely to produce earthquakes in the future.

Periodic earthquakes accompanied by surface displacement can be expected to continue in the City. Active and potentially active faults within 50 miles of the project that are significant potential seismic sources relative to the proposed project are presented in Table 5.7-1.

Table 5.7-1. Significant Active and Potentially Active Faults within 50 miles of the Proposed Project

Fault Name	Distance[1] (miles)	Estimated Maximum Magnitude[2,3]
Monte Vista–Shannon	4.8	6.5
San Andreas	8.6	7.1-7.9
Hayward–Rodgers Creek	10.6	6.8–7.3
Calaveras	11.9	6.3–7.0
Zayante-Vergeles	17.3	7.0
San Gregorio	22.3	7.5
Greenville Connected	26.5	7.0
Mount Diablo Thrust	28.2	6.7
Monterey Bay–Tularcitos	29.9	7.3
Great Valley 7	36.9	6.9
Green Valley Connnected	38.6	6.8
Ortigalita	38.8	7.1
Quien Sabe	44.4	6.6
Great Valley 8	45.6	6.8
Great Valley 5	47.2	6.7
Rinconada	47.5	7.5

1 - Fault distances obtained from the 2008 National Seismic Hazard Maps – Source Parameters website (USGS, 2022).
2 - Maximum Earthquake Magnitude – the maximum earthquake that appears capable of occurring under the presently known tectonic framework; magnitude listed is "Ellsworth-B" magnitude from USUSGS OF08-1128 (Documentation for the 2008 Update of the U.S. National Seismic Hazard Maps) unless otherwise noted.
3 - Range of Magnitude represents varying potential rupture scenarios with single or multiple segments rupturing in various combinations.

Fault Rupture

Fault rupture is the surface displacement that occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture and displacement almost always follows preexisting faults, which are zones of weakness; however, not all earthquakes result in surface rupture (i.e., earthquakes that occur on blind thrusts do not result in surface fault rupture). Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. In addition to damage caused by ground shaking from an earthquake, fault rupture is damaging to buildings and other structures due to the differential displacement and deformation of the ground surface that occurs from the fault offset leading to damage or collapse of structures across this zone.

While the closest fault to the project site is the active Monte Vista–Shannon, no known active or potentially active faults are mapped crossing or immediately adjacent to the proposed project site (CGS, 2022). Additionally, the City of Santa Clara is not crossed by any faults zoned under the Alquist-Priolo Earthquake Fault Zoning Act (CGS, 2007, as cited in City of Santa Clara, 2011). There is no risk of surface fault rupture at the project site.

Ground Shaking

An earthquake is classified by the amount of energy released, which traditionally has been quantified using the Richter scale. Recently, seismologists have begun using a Moment Magnitude (M) scale because it provides a more accurate measurement of the size of major and great earthquakes. For earthquakes of less than M 7.0, the Moment and Richter Magnitude scales are nearly identical. For earthquake magnitudes greater than M 7.0, readings on the Moment Magnitude scale are slightly greater than a corresponding Richter Magnitude. Numerous moderate and large earthquakes have occurred within 50 miles of the project site, including 38 earthquakes of M 5.0 or greater which includes 4 earthquakes of M 6.0 to M 6.9, and one earthquake of M 7.9. These include the catastrophically damaging 1906 M 7.9 San Francisco Earthquake and the 1989 M 6.9 Loma Prieta Earthquake and its aftershocks (USGS, 2022).

The intensity of the seismic shaking, or strong ground motion, at the project site during an earthquake is dependent on the distance between the project area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the project area. Earthquakes occurring on faults closest to the project area would most likely generate the largest ground motion. Earthquake damage resulting from ground shaking is determined by several factors: the magnitude of an earthquake, depth of focus, distance from the fault, intensity and duration of shaking, local groundwater and soil conditions, presence of hillsides, structural design, and the quality of workmanship and materials used in construction. The USGS National Seismic Hazard (NSH) Maps were used to estimate approximate peak ground accelerations (PGAs) in the proposed project area. The NSH Maps depict peak ground accelerations with a 2 percent probability of exceedance in 50 years which corresponds to a return interval of 2,475 years and for a maximum considered earthquake. The estimated approximate peak ground acceleration from large earthquakes for the project site is 0.80 g, which corresponds to strong ground shaking (USGS, 2014). The City is located in a region characterized by a moderate to high ground shaking hazard. (City of Santa Clara, 2011)

Liquefaction

Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects (Youd and Perkins, 1978). In addition, densification of the soil resulting in vertical settlement of the ground can also occur. In order to determine liquefaction susceptibility of a region, three major factors are considered: the density and textural characteristics of the alluvial sediments; the intensity and duration of ground shaking; and the depth to groundwater.

The City of Santa Clara is almost entirely within the zone of liquefaction hazard (County of Santa Clara, 2012). Ground failure caused by liquefaction is thus a substantial concern for much of the City's development. The project site is within and near the southwestern edge of a mapped CGS liquefaction hazard zone (CGS, 2022). Additionally, the project site is underlain by potentially liquefiable young alluvial sediments with a relatively shallow perched water table of 20 feet or less (CGS, 2002; DWR, 2022).

Paleontology

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. These are valued for the information they yield about the history of the earth and its past ecological settings. According to the City of Santa Clara General Plan EIR, the City is situated on alluvial fan deposits of the Holocene age, consisting of gravel, sand and finer sediments. Along the City's major streams are natural levee deposits consisting of silt and clay, also of the Holocene age. Geologic units of Holocene age are generally not considered sensitive for paleontological resources, because biological remains younger than 10,000 years are not usually considered fossils. Holocene materials in the Santa Clara Valley may have some level of sensitivity for paleontological resources (City of Santa Clara, 2011).

The City is in the Santa Clara Valley, where these Holocene age sediments overlie older, Pleistocene age sediments that have a high potential to contain paleontological resources. The Pleistocene age sediments, often found at depths of 10 feet (3 meters) or more below the ground surface in the region, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates (City of Santa Clara, 2011).

The project site is underlain by artificial fill over young channel deposited alluvial sediments which have no and low paleontological sensitivity, respectively; the young alluvial sediments are unlikely to have significant fossils due to their age and their high energy method of deposition. The greatest anticipated depth of any excavation at the site would be 10 feet for new transmission poles. All other excavations would be at shallower depths.

Regulatory Background

Federal

The Clean Water Act. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the Waters of the U.S. The Act authorized the Public Health Service to prepare comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries and improving the sanitary condition of surface and underground waters with the goal of improvements to and conservation of waters for public water supplies, propagation of fish and aquatic life, recreational purposes, and agricultural and industrial uses. The proposed project construction may disturb a surface area greater than one acre; therefore, SVP would be required to obtain a National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity under Clean Water Act regulations. Compliance with the NPDES would require that the applicant prepare and submit a Storm Water Pollution Prevention Plan (SWPPP).

The International Building Code (IBC). The International Building Code (IBC) is published by the International Code Council (ICC). The scope of this code covers major aspects of the design and construction and structures and buildings, except for three-story one- and two-family dwellings and town homes. The International Building Code has replaced the Uniform Building Code as the basis for the California Building Code and contains provisions for structural engineering design. The 2018 IBC addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs.

State

The California Building Code, Title 24, Part 2 (CBC, 2019). The California Building Code, Title 24, Part 2 provides building codes and standards for design and construction of structures in California. The 2019 CBC is based on the 2018 International Building Code with the addition of more extensive structural seismic provisions. Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972, Public Resources Code (PRC), sections 2621–2630 (formerly the Special Studies Zoning Act). The Alquist-Priolo Earthquake Fault Zoning Act regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. While this Act does not specifically regulate transmission and telecommunication lines; it does help define areas where fault rupture is most likely to occur. This Act groups faults into categories of active, potentially active, and inactive faults. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geologic explorations in order to determine whether building setbacks should be established.

The Seismic Hazards Mapping Act (the Act) of 1990 (Public Resources Code, Chapter 7.8, Division 2, sections 2690–2699). The Act directs the California Department of Conservation, Division of Mines and Geology [now called California Geological Survey (CGS)] to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

Public Resources Code Section 5097.5. PRC Section 5097.5 provides for the protection of cultural resources. This PRC section prohibits the removal, destruction, injury, or defacement of archaeological features on any lands under the jurisdiction of State or local authorities.

PRC Section 5097.5 also affirms that no person shall willingly or knowingly excavate, remove, or otherwise destroy a vertebrate paleontological site or paleontological feature without the express permission of the overseeing public land agency. It further states under PRC Section 30244 that any development that would adversely impact paleontological resources shall require reasonable mitigation. These regulations apply to projects located on land owned by or under the jurisdiction of the State or any city, county, district, or other public agency (PRC §5097.5). The importance of paleontological resources is based on their scientific and educational value. The Society of Vertebrate Paleontology identifies vertebrate fossils, their taphonomic (fossilization process) and associated environmental data, and fossiliferous deposits as scientifically significant nonrenewable paleontological resources (Society of Vertebrate Paleontology, 2010). Botanical and invertebrate fossils and assemblages may also be significant. Absent specific agency guidelines, most professional paleontologists in California adhere to guidelines set forth in "Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources" (Society of Vertebrate Paleontology, 2010). These categories include high, undetermined, low, and no potential.

Local

City of Santa Clara General Plan. The purpose of the City's safety policies is to identify potential hazards and measures that can lessen risks for the City's population and property. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.5-P5.** Regulate development, including remodeling or structural rehabilitation, to ensure adequate mitigation of safety hazards, including flooding, seismic, erosion, liquefaction and subsidence dangers.
- **Policy 5.10.5-P6.** Require that new development is designed to meet current safety standards and implement appropriate building codes to reduce risks associated with geologic conditions.

- **Policy 5.10.5-P7.** Implement all recommendations and design solutions identified in project soils reports to reduce potential adverse effects associated with unstable soils or seismic hazards.
- **Policy 5.10.5-P10.** Support efforts by the Santa Clara Valley Water District to reduce subsidence.

In addition, the following Goals and Policies are identified related to paleontology:

Archaeological and Cultural Resources Goals

- **Goal 5.6.3-G1.** Protection and preservation of cultural resources, as well as archaeological and paleontological sites.
- **Goal 5.6.3-G2.** Appropriate mitigation in the event that human remains, archaeological resources or paleontological resources are discovered during construction activities.

Archaeological and Cultural Resources Policies

- **Policy 5.6.3-P1.** Require that new development avoid or reduce potential impacts to archaeological, paleontological and cultural resources.
- **Policy 5.6.3-P2.** Encourage salvage and preservation of scientifically valuable paleontological or archaeological materials.
- **Policy 5.6.3-P4.** Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and in the Old Quad neighborhood.
- **Policy 5.6.3-P5.** In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeologist/paleontologist.

5.7.2 Environmental Impacts and Mitigation Measures

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

NO IMPACT. No Alquist-Priolo mapped or other known faults cross the proposed project area or are immediately adjacent to it. Therefore, there is no potential for the project to damage by fault rupture and no project activities would result in triggering or to directly or indirectly causing primary fault rupture.

ii) Strong seismic ground shaking?

LESS THAN SIGNIFICANT. The proposed project would be located in an area mapped as likely to experience strong ground shaking in the event of a large earthquake with a PGA of 0.80 for a 2 percent probability of exceedance in 50 years. The area has historically experienced moderate to severe ground shaking due to the numerous earthquakes that have occurred in the San Francisco Bay Area. These earthquakes have resulted in severe damage to structures, billions of dollars in property damage, and deaths.

The transmission line work associated with the rebuild project would be designed to a wind loading standard that generally also exceeds seismic loading criteria, thus reducing the risk of a pole failing during

a seismic event. Substation components are and would be designed to appropriate and applicable codes and seismic standards and guidelines, including those presented in IEEE 693 (Recommended Practices for Seismic Design of Substations). The potential for earthquake-induced groundshaking damage to the new poles would not change from the current conditions; therefore, there would be a less-than-significant impact for the project to directly or indirectly cause substantial adverse effects as a result of ground-shaking.

iii) Seismic-related ground failure, including liquefaction?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed project site is within a CGS liquefaction hazard zone and is underlain by potentially liquefiable sediments and shallow groundwater. Therefore, the potential for liquefaction-related damage to the substation and newly installed poles is high. To ensure that direct and indirect impacts associated with seismically induced ground failures or liquefaction would be less than significant, mitigation measure MM G-1 (Conduct Geotechnical Investigations for Liquefaction) shall be implemented prior to final project design to ensure that people or structures are not exposed to hazards from the project associated with earthquake-induced liquefaction.

Mitigation Measure for Seismically Induced Liquefaction

MM G-1 **Conduct Geotechnical Investigations for Liquefaction.** Because seismically induced liquefaction-related ground failure has the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for liquefaction to affect the new project poles and substation components at the project site. Where liquefaction hazards are found to exist/verified, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include bigger foundations, installation of flexible bus connections, and/or incorporation of slack in cables to allow ground deformations without damage to structures.

iv) Landslides?

NO IMPACT. The proposed project would be located on a flat to relatively flat graded area on the gently sloping Santa Clara Valley floor and no known landslides have occurred in the project vicinity; therefore, landslides and other slope failures are highly unlikely to occur. There would be no impact related to landslides or slope instability.

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

LESS THAN SIGNIFICANT. The project site is flat to nearly flat. Increased rates of soil erosion are not expected to result from the installation of a substation, structures for the 60 kV transmission line relocation due to the limited amount of surface ground disturbance anticipated for construction of these features. Surface disturbing activities such as trenching or grading will be required for construction of the proposed project but would be done in compliance with regulations pertaining to sediment and runoff control, including silt fencing on the site perimeter. (In addition, as noted in Section 5.10 Hydrology and Water Quality, a stormwater pollution prevention plan or erosion control plan would be required under mitigation measure MM HYD-1 to address surface water quality.) These measures would limit the potential erosion or loss of topsoil. Therefore, there would be a less than significant impact.

c. Would the project be located on geologic units 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 WITH MITIGATION INCORPORATED. As discussed above in Item (a)(iii) regarding liquefaction, the proposed project would be constructed in an area within the zone of liquefaction hazard; therefore, structures could potentially suffer liquefaction-related damage. However, implementation of mitigation measure MM G-1 (Conduct geotechnical investigations for liquefaction) prior to final project design would ensure that people or structures are not exposed to hazards associated with earthquake-induced liquefaction, reducing the impact to less than significant. Additionally, as discussed above in Item (a)(iv) Landslides, there would be no impact from landslides as the proposed project is located on and traverses flat to gently sloping terrain and would not be subject to landslides.

d. Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2019), creating substantial direct or indirect risks to life or property?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Mapping by the NRCS indicates that the project site may be underlain by soils with high to very high expansive potential. Expansive soils could impact the integrity and stability of transmission poles and substation components, damaging the structures and potentially injuring workers. To ensure that direct and indirect impacts associated with expansive soils would be less than significant, mitigation measure MM G-2 (Conduct Geotechnical Investigations for Expansive Soils) shall be implemented prior to final project design to ensure that people or structures are not exposed to hazards from the project associated with expansive soils.

Mitigation Measure for Expansive Soils

MM G-2 **Conduct Geotechnical Investigations for Expansive Soils.** Because expansive soils have the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for expansive soils to affect the new project components at the project site. Where expansive soils are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate impacts from expansive soil could include over-excavation and replacement with engineered fill or soil improvements.

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 proposed project would not include any components requiring septic tanks or alternative wastewater systems. Therefore, there would be no impact.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed project is anticipated to disturb the ground surface up to depths of 10 feet in artificial fill and young alluvial sediments. Therefore, project construction would not have the potential to impact older Quaternary Alluvium, known to occur at depth below 20 feet, that may contain unique paleontological resources or sites. However, although there is a low possibility that previously unknown paleontological resources or unique geologic features could be discovered and damaged or destroyed during ground disturbance, which would constitute a significant

impact absent mitigation. Implementation of mitigation measure MM G-3 would evaluate and protect unanticipated discoveries of unique paleontological resources or unique geologic features, thereby reducing this potential impact to a less than significant level.

Mitigation Measure for Previously Unidentified Paleontological Resources

MM G-3 **Worker Training and Management of Unanticipated Discoveries of Paleontological Resources.** In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing or other construction activities, a paleontologist must be retained who meets the professional paleontologist qualifications (Society of Vertebrate Paleontology's Standard Procedures, 2010) and has demonstrated experience in carrying paleontological projects to completion. This qualified paleontologist must develop and implement a Paleontological Resources Management Plan (PRMP) for the project area that meets the standards set forth by the Society of Vertebrate Paleontology (2010). This shall include:

- A Worker Environmental Awareness Program (WEAP) wherein all construction personnel are trained on the processes to be followed upon encountering any fossils.
- A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. Monitors shall be onsite for any disturbance of sediments with high or unknown paleontological sensitivity. Monitors must have demonstrated sufficient paleontological training and field experience to have acceptable knowledge and experience of fossil identification, salvage and collection methods, paleontological techniques, and stratigraphy.
- A recovery plan for significant fossils that provides for the treatment of specimens to the point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.
- A specimen identification, analysis, and curation plan that includes identification to the lowest taxonomic level possible; taxonomic, taphonomic, and biostratigraphic analysis; and curation to the standards of the repository where they will be curated.

5.8 Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.8.1 Setting

Physical Setting and Effects of GHG Emissions. The global climate depends on the presence of naturally occurring greenhouse gases (GHG) to provide what is commonly known as the "greenhouse effect" that allows heat radiated from the Earth's surface to warm the atmosphere. The greenhouse effect is driven mainly by water vapor, aerosols, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and other constituents. Globally, the presence of GHG affects temperatures, precipitation, sea levels, ocean currents, wind patterns, and storm activity.

Human activity directly contributes to emissions of six primary anthropogenic GHGs: CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The standard definition of anthropogenic GHG includes these six substances under the 1997 Kyoto Protocol (UNFCCC, 1998). The most important and widely occurring anthropogenic GHG is CO_2, primarily from the use of fossil fuels as a source of energy.

Changing temperatures, precipitation, sea levels, ocean currents, wind patterns and storm activity provide indicators and evidence of the effects of climate change. For the period 1950 onward, relatively comprehensive data sets of observations are available. Research by California's Office of Environmental Health Hazard Assessment (OEHHA) reports certain climate change indicators by categorizing the effects as: changes in California's climate; impacts to physical systems including oceans, lakes, rivers, and snowpack; and impacts to biological systems including humans, vegetation, and wildlife. The primary observed changes in California's climate include increased annual average air temperatures, more-frequent extremely hot days and nights, and increased severity of drought. Impacts to physical systems affected by warming temperatures and changing precipitation patterns show decreasing snowmelt runoff, shrinking glaciers, and rising sea levels. Impacts to terrestrial, marine, and freshwater biological systems, with resulting changes in habitat, agriculture, and food supply are occurring in conjunction with the potential to impact human well-being (OEHHA, 2018).

GHG-Emissions Trends. California first formalized a strategy to achieve GHG reductions in 2008, when California produced approximately 484 million metric tons of CO_2 equivalent (MMTCO2e) according to the official Air Resources Board inventory (ARB, 2021). The economy-wide emissions have been declining in recent years, and California emitted approximately 418 MMTCO2e in 2019 (ARB, 2021). Globally, anthropogenic GHG emissions have increased by roughly 80%, from around 27,000 to 49,000 MMTCO2e per year between 1970 and 2010 (IPCC, 2014). In this global context, California emits less than one percent of the global anthropogenic GHG.

Regulatory Background

California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)]. The California Global Warming Solutions Act of 2006 (AB 32) required that California's greenhouse gas (GHG) emissions be reduced to 1990 levels by 2020. The reduction is being accomplished through an enforceable statewide cap on global warming emissions beginning in 2012. AB 32 directs the ARB to develop regulations and a mandatory reporting system to track and monitor global warming emissions levels (AB 32, Chapter 488, Statutes of 2006). The ARB Climate Change Scoping Plan, initially approved December 2008 and most recently updated by ARB in December 2017, provides the framework for achieving California's goals (ARB, 2017). AB 32 requires ARB to update the Scoping Plan at least every 5 years. Accordingly, the 2022 Scoping Plan is under development.

In passing AB 32, the California Legislature found that:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine eco-systems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problem.*

Other major Executive Orders, legislation, and regulations adopted for the purpose of reducing GHG emissions support the implementation of AB 32 and California's climate goals, as described below.

California Governor's Executive Order B-30-15 and Senate Bill 32 (SB 32). Executive Order B-30-15 (April 2015) establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. One purpose of this interim target is to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. This executive order also specifically addresses the need for climate adaptation and directs state agencies to update the California Climate Adaptation Strategy to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change. Senate Bill 32 (SB 32) of 2016 codifies this GHG emissions target to 40 percent below the 1990 level by 2030.

Clean Energy and Pollution Reduction Act of 2015 [Senate Bill 350 (SB 350)]. California's state policy objectives on long-term energy planning were updated with SB 350 legislation that was signed into law on October 7, 2015. The requirements include demonstrating through integrated resource planning how each energy service provider, such as SVP, will continue to expand the use of renewable energy supplies in the mix of electricity delivered to end-use customers. With SB 350 California expanded the specific set of objectives to be achieved by 2030, with the following:

- To increase the Renewable Portfolio Standard (RPS) from 33 percent to 50 percent for the procurement of California's electricity from renewable sources; and
- To double the energy efficiency savings in electricity and natural gas end uses by retail customers.

California Governor's Executive Order B-55-18 and Senate Bill 100 (SB 100). Beyond 2030, Executive Order B-55-18 establishes a statewide goal for California to achieve carbon neutrality by 2045. In September 2018, Senate Bill 100 (SB 100), to revise and extend California's Renewables Portfolio Standard program, was signed into law. SB 100 accelerated the RPS targets and established the goals of 50 percent renewable energy resources by 2026 and 60 percent renewable energy resources by 2030. These RPS targets are codified according to compliance periods in Pub. Util. Code Section 399.30, as follows: 33 percent by

December 31, 2020, 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. SB 100 also sets a target for California to achieve a GHG-free electricity supply for 100 percent of retail sales of electricity to California end-use customers by December 31, 2045.

Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100 to 95158). The ARB Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, or mandatory reporting rule (MRR), applies to electric power distribution companies and to fossil fuel electricity generating facilities with a nameplate capacity equal or greater than 1 MW capacity. As an Electric Power Entity under this rule, SVP must report GHG emissions associated with providing electricity to end-use customers.

Cap-and-Trade Program (17 CCR 95801 to 96022). The California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade Program) was initially approved by ARB in 2011. The Cap-and-Trade Program applies to covered entities that fall within certain source categories, including first deliverers of electricity (such as fossil fuel power plants) and electrical distribution utilities, such as SVP. The covered entities must hold compliance instruments sufficient to cover the actual GHG emissions, as evidenced through the MRR requirements. This means that SVP, as an electrical distribution utility, bears the GHG compliance obligation for electricity delivered to end-users that are not otherwise covered entities in the Cap-and-Trade Program.

Emission Reductions of SF_6 from Gas Insulated Switchgear (17 CCR 95350 to 95359). In 2010, ARB adopted a regulation for reducing or phasing-out SF_6 emissions from electric power system gas insulated switchgear. The regulation requires owners of such switchgear to: (1) annually report their SF_6 emissions; (2) determine the emission rate relative to the SF_6 capacity of the switchgear; (3) provide a complete inventory of all gas insulated switchgear and their SF_6 capacities; (4) produce a SF_6 gas container inventory; and (5) keep all information current for ARB enforcement staff inspection and verification.

City of Santa Clara, Climate Action Plan (CAP). The City of Santa Clara CAP, adopted on December 3, 2013, proposed to reduce community GHG emissions to 15 percent below 2008 levels by the year 2020. The CAP's reduction measures address energy use, transportation, land use, water, solid waste, and off-road equipment. On June 7, 2022, the City Council unanimously adopted an updated CAP to align with California's 2030 GHG reduction targets and carbon neutrality goals for 2045. The City's 2022 CAP envisions a 40 percent reduction in emissions by 2030 (Senate Bill 32), with an interim target of an 80 percent reduction in emissions by 2035, as it moves toward a 2045 goal of net carbon neutrality (EO B-55-18). In developing the CAP strategies, the City considered how actions contribute to social and economic co-benefits like emissions reductions, equity, green jobs, cost savings and others.

5.8.2 Environmental Impacts and Mitigation Measures

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

LESS THAN SIGNIFICANT. The proposed activities include mobilizing construction equipment, crews, and materials, excavating holes for poles, installing concrete foundations and equipment, installing poles, and wire stringing. These activities during construction would cause GHG emissions due to fuels used by the construction vehicles and equipment. Diesel and gasoline-powered construction equipment would include trucks for materials and crews, and the following types of equipment: auger, backhoe or loader, crane, compactor, small welder, pump, and generator. Equipment and motor vehicles would directly emit CO_2, CH_4, and N_2O due to fuel use and combustion, and motor vehicle fuel combustion emissions in terms of CO2e are approximately 95 percent CO_2, and CH_4 and N_2O emissions occur at rates of less than 1 percent of the mass of combustion CO_2 emissions.

The resulting one-time quantity of GHG emitted during the 30-month period of construction would be around 774 MTCO2e (Aspen, 2022), based on use of the California Emissions Estimator Model (CalEEMod; v.2020.4.0). These one-time project-level emissions would cease at the conclusion of construction and would be well below the threshold level of 10,000 MTCO2e per year for annually recurring emissions from stationary sources (BAAQMD, 2017).

Upon completion of construction, operation of the project would not result in a notable incremental increase in GHG emissions from O&M activities. Substations involving new or modified circuit breakers would use gas insulated switchgear that would be a source of GHG due to the leakage of SF_6. The quantity of potential SF_6 emissions and the total rate in terms of CO2e would be minor, and the circuit breakers would be required to comply with the ARB-adopted standards for SF_6 use in gas insulated circuit breakers. The resultant level of GHG would not have a significant impact on the environment, and the impact associated with the GHG emissions would be less than significant.

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

LESS THAN SIGNIFICANT. California's regulatory setting for GHG emissions (Section 5.8.1) ensures that most of the existing and foreseeable GHG sources in electric power sector are subject to one or more programs aimed at reducing GHG. The Climate Change Scoping Plan (ARB, 2017) provides an outline of actions to reduce California's GHG emissions. The scoping plan requires ARB and other state agencies to adopt regulations and other initiatives to reduce GHGs.

The proposed project would generate the limited quantities of direct GHG emissions from the construction and O&M activities. The mix of power serving the end-use customers would not change as a result of the proposed project. The proposed project would improve the infrastructure used in delivery of SVP's energy supply and would not affect SVP's ability to supply renewable energy. By improving the substation, the project would be likely to improve energy efficiency in delivery of electricity. Electrical losses associated with the high voltage transmission system are generally less than losses within the lower-voltage distribution system mainly because the total length of transmission lines is far less than that for distribution in most power systems, and that currents and thus losses are lower at high voltages (IPCC, 2014).

California's Cap-and-Trade regulation is the major climate program covering project related GHG emissions. Construction and O&M activities would cause GHG emissions due to fuels used by the vehicles and equipment. The end-users of motor vehicle fuels like gasoline and diesel may include construction contractors that are not otherwise designated as covered entities in the Cap-and-Trade program, and these do not directly bear the Cap-and-Trade compliance obligation. However, all fuel suppliers, including refiners and pipeline companies, must cover the end-user's GHG emissions. Because the project-related GHG emissions, including construction-phase emissions and the operational-phase mobile source emissions, would be "covered" by the fuel suppliers subject to Cap-and-Trade requirements, these emissions would not conflict California's progress towards achieving GHG reductions.

As in the existing conditions, SVP would comply with ARB SF_6 regulations to inventory, report, and minimize SF_6 leaks through the use of new technology. By complying with these requirements, the proposed project would not conflict with any applicable GHG management plan, policy, or regulation. Therefore, this impact would be less than significant.

5.9 Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. Be located on a site which is included on a list of hazardous 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?	☐	☐	☐	☒
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.9.1 Setting

This section addresses issues related to environmental hazards and hazardous materials in the existing conditions. Environmental hazards include accidental spills of hazardous materials, the presence of existing subsurface contamination, the risk of wildfire, and aircraft safety. Hazardous materials include fuel, oil, and lubricants. If encountered, contaminated soil can pose a health and safety threat to workers or the public.

Existing and Past Land Uses

Existing and past land use activities are commonly used as indicators of sites or areas with potential for hazardous material storage and use or potential environmental contamination. For example, many current and historic industrial sites have soil or groundwater contamination by hazardous substances. Other hazardous materials sources include leaking underground tanks in commercial and rural areas, contaminated surface runoff from polluted sites, and contaminated groundwater plumes.

The project area is located in a highly developed urban area in the southwest section of the City of Santa Clara. Current land uses in this area are primarily medium density residential, neighborhood commercial, and parks/open space. Prior to the 1950's, land use in the project area was agriculture.

Hazardous Materials

Construction activities routinely involve use and storage of hazardous materials such as cleaning solvents, paints, adhesives, vehicle fuels, oil, hydraulic fluid, and other vehicle and equipment maintenance fluids. The use and storage of such materials must comply with federal and state regulations. Use of hazardous material during construction of the rebuilt substation would be limited to motor vehicles fluids associated with construction vehicles. No acutely hazardous materials would be associated with construction, maintenance, or operation of the project.

Environmental Contamination

The project site is located near commercial activities. A review of the State Water Resources Control Board (SWRCB) GeoTracker (SWRCB, 2021) and California Department of Toxic Substance Control (DTSC) EnviroStor databases (DTSC, 2021b) revealed that there are currently no sites that have known or potential contamination to soils or groundwater near the project site. The proposed project is not located at or near sites identified on a list of hazardous materials waste and substances sites pursuant to Government Code Section 65962.5, including the Cortese List (DTSC, 2021a). There are no EnviroStor listed sites within 1 mile of the project site (DTSC, 2021b). However, there are 22 GeoTracker listed sites with known or potential environmental contamination within 1 mile of the proposed project site.

The GeoTracker listings include 18 leaking underground storage tank (LUST) sites, and 4 cleanup program site sites. Seventeen of the LUST sites are listed as completed-case closed and the remaining LUST site is listed as open but eligible for closure and is located over 0.75 miles west of the project site. None of the LUST site present a contamination hazard to the project site.

All 4 of the GeoTracker listed cleanup program sites are dry cleaner locations (3 former and one active) (SWRCB, 2021). The closest cleanup program site to the project site is a former dry cleaner site at 2660 Homestead Road, located approximately 1,100 feet southeast of the project site, and is listed as open-inactive with a no further action determination and with land use restrictions; however, a requested amendment to the deed restriction has been submitted to the RWQCB to allow for mixed-use redevelopment of the site (SWRCB, 2022). Current contamination issues are primarily soil and soil vapor due to the previous dry cleaner operation. Due to the contamination at this site being confined to soil and soil vapor it is unlikely any contamination would have migrated beyond the property. The three other cleanup program sites are located more than 0.85 miles from the substation project site and do not represent a contamination hazard to the project site.

Schools

There are three schools located within a 0.25-mile radius of the project site. The Children's World Bilingual Montessori School, located just over 100 feet to the southeast of the site on Kiely Boulevard, serves children aged two through six. San Jose Art Academy, located approximately 300 feet southwest of the project site on Homestead Road, is an art school providing in-studio classes and after school programs for grades kindergarten through high school. St. Justin Catholic School, located approximately 900 feet east of the project site on Homestead Road, is a private school for preschool through eighth grade.

Airports and Airstrips

The Norman Y. Mineta San Jose International Airport is located to the east of, and adjacent to, the City of Santa Clara. The airport is located approximately 3 miles northeast of the proposed project site. A private heliport, McCandless heliport, is located over 3 miles north of the project area.

Electromagnetic Fields

Electric voltage and electric current from transmission lines create electromagnetic fields (EMF). Possible health effects associated with exposure to EMF have been the subject of scientific investigation since the 1970s, and there continues to be public concern about the health effects of EMF exposure. However, EMF is not addressed here as an environmental impact under CEQA. SVP has repeatedly recognized that EMF is not an environmental impact to be analyzed in the context of CEQA because (1) there is no agreement among scientists that EMF does create a potential health risk, and (2) there are no defined or adopted CEQA standards for defining health risks from EMF.

Regulatory Background

Hazardous substances are defined by federal and State regulations that aim to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14), and also in the California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

> *A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.*

Soil excavated from a site containing hazardous materials would be considered a hazardous waste if it exceeded specific CCR Title 22 criteria or criteria defined in CERCLA or other relevant federal regulations. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; it may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Federal

Toxic Substances Control Act. The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

CERCLA, including the Superfund program, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

State

California Environmental Protection Agency. The California Environmental Protection Agency (Cal/EPA) was created in 1991, which unified California's environmental authority in a single cabinet-level agency and brought the Air Resources Board (ARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), Integrated Waste Management Board (IWMB), DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the Cal/EPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality.

California Hazardous Waste Control Law. The California Hazardous Waste Control Law (HWCL) is administered by Cal/EPA to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the EPA approves the California program, both the State and federal laws apply in California. The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Department of Toxic Substance Control. Department of Toxic Substance Control (DTSC) is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Department of Industrial Relations, Division of Occupational Safety and Health Administration. The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Fire Plan. The Strategic California Fire Plan was finalized in June 2010 and directs each California Department of Forestry and Fire Protection (CAL FIRE) Unit to prepare a locally specific Fire Management Plan. In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of CAL FIRE's 21 units and six contract counties. The plans include stakeholder contributions and priorities and identify strategic areas for pre-fire planning and fuel treatment, as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.

Local

City of Santa Clara General Plan. The purpose of the City's safety policies is to identify potential hazards and measures that can lessen risks for the City's population and property. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.5-P22.** Regulate development on sites with known or suspected contamination of soil and/or groundwater to ensure that construction workers, the public, future occupants and the environment are adequately protected.

- **Policy 5.10.5-P23.** Require appropriate clean-up and remediation of contaminated sites.
- **Policy 5.10.5-P24.** Protect City residents from the risks inherent in the transport, distribution, use and storage of hazardous materials.
- **Policy 5.10.5-P27.** Locate hazardous waste management facilities in areas designated as Heavy Industrial on the Land Use Diagram if compatible with surrounding uses and consistent with the County Hazardous Waste Management Plan.

5.9.2 Environmental Impacts and Mitigation Measures

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

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. The use of hazardous materials during project construction would be minimal. Hazardous materials may include gasoline, diesel fuel, hydraulic oils, equipment coolants, and any generated wastes that may include these materials. These materials are considered hazardous because they are flammable and/or contain toxic compounds, such as volatile organic compounds and heavy metals. Wastes considered hazardous by the State of California would be transported and disposed of according to applicable federal, State, and local regulations, as described above under Applicable Regulations. Fueling and routine maintenance of construction equipment and vehicles would be performed off site to the greatest extent feasible. However, minor spills or releases of hazardous materials could occur due upset or improper handling and/or storage practices during construction activities.

Therefore, implementation of mitigation measure MM HM-1 (Hazardous Substance Control and Emergency Response) would reduce potential impacts associated with hazardous material transport, use, and disposal during construction, which would ensure that project construction would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Further, SVP would also implement its existing hazardous substance control and emergency response procedures. In addition, three wooden poles would be replaced by three new steel poles. The wooden poles would be removed from the project site. The wooden poles have been treated with a wood preservative that contains hazardous compounds such as polycyclic aromatic hydrocarbons. During disposal, these treated wood poles would be classified as Utility Wood Waste (UWW), which is a category of Treated Wood Waste (TWW). Once removed from the ground, the wooden poles would be transported offsite to a staging yard from where they would be transported to an appropriately licensed Class I (hazardous waste) or Class II (designated waste) landfill or the composite-lined portion of a solid waste landfill approved by the appropriate Regional Water Quality Control Board (RWQCB). The transport and disposal of the poles would not pose a significant hazard to the environment or the public.

Mitigation Measure for Transport, Use, or Disposal of Hazardous Materials

MM HM-1 **Hazardous Substance Control and Emergency Response.** SVP shall implement its hazardous substance control and emergency response. procedures as needed. These procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on site. If it is necessary to store chemicals on

site, they shall be managed in accordance with all applicable regulations. Material safety data sheets shall be maintained and kept available on site, as applicable.

No known soil contamination was identified within the project area. In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested and, if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.

All hazardous materials and hazardous wastes shall be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following:

- Proper disposal of potentially contaminated soils.
- Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources.
- Emergency response and reporting procedures to address hazardous material spills.
- Stopping work at that location and contacting the City Fire Department Hazardous Materials Division immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Division.

SVP shall complete its Emergency Action Plan Form as part of project tailboard meetings. The purpose of the form is to gather emergency contact numbers, identify first aid locations and provide other tailboard safety information.

LESS THAN SIGNIFICANT IMPACT – OPERATION AND MAINTENANCE. Other than substances associated with motor vehicles that would be used for inspections, no hazardous materials are associated with maintenance and operation of the project. SVP would implement existing operation and maintenance policies to address hazardous materials use after the project construction is complete. Impacts associated with the transport, use, and disposal of hazardous materials would be less than significant.

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 INCORPORATED – CONSTRUCTION. Accidental spills of motor vehicles fluids associated with construction vehicles could occur during construction of the proposed project as discussed in Item (a) above. The minimal amounts of hazardous materials anticipated for use in the project coupled with implementation of mitigation measure MM HM-1 requirements would reduce potential impacts by requiring the development and implementation of hazardous substance control and health and safety measures.

Mitigation Measure for Accidental Release of Hazardous Materials

MM HM-1 **Hazardous Substance Control and Emergency Response**. [see full text under Item (a) above]

LESS THAN SIGNIFICANT IMPACT – OPERATION AND MAINTENANCE. SVP's operation and maintenance policies currently applied to substation that address the potential release of hazardous materials in upset or accident conditions would be implemented after the project is complete. These policies and plans ensure a thorough recordkeeping of hazardous materials and provide site-specific recommendations for spill prevention and emergency response procedures and would ensure impacts are 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?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED The proposed project site is within 0.25 miles of an existing or proposed school. Small amounts of hazardous materials will be used and may be stored during project construction and operation; however, no acutely hazardous materials are anticipated to be used during project construction or operation. Implementation of mitigation measure MM HM-1 would ensure that the potential impact to area schools as a result of hazardous emissions or hazardous materials, substances or waste from the proposed project would be less than significant.

d. Would the project be located on a site that 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?

NO IMPACT. The proposed project site is not located on or adjacent to any known hazardous materials sites as identified on government agency listings; therefore, no significant hazard the public or the environment would be created.

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?

NO IMPACT. The proposed project site is not located within an airport land use plan; it is located 3 miles away from the Norman Y. Mineta San Jose International Airport and not within the Airport Influence Area. The proposed project site is also located over 3 miles from a private heliport. Due to this distance, the project would not result in a safety hazard for people residing or working in the project area.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. Construction-related temporary short-term lane closures or disruptions may be necessary during the 30-month construction period. In June 2016, the Santa Clara City Council adopted a new comprehensive emergency response plan to replace the prior plan adopted in 2008. The plan provides a legal framework for the management of emergencies and guidance for the conduct of business in the City's Emergency Operations Center (EOC), including collaboration and coordination between different responsible agencies. The Emergency Operations Plan (EOP) establishes responsibilities and procedures for addressing potential emergencies related to disasters such as earthquakes, flooding, and dam failure; technological incidents; hazardous materials spills or releases; and incidents of domestic terrorism involving weapons of mass destruction, such as Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) devices. The EOP conforms to the requirements of the National Incident Management System (NIMS) mandated by the U.S. Department of Homeland Security. The Santa Clara EOP also builds on and coordinates with the State's Standardized Emergency Management System (SEMS) and the California State Emergency Plan.

The EOP does not identify specific emergency shelters or evacuation routes in Santa Clara, though schools are identified as preferred facilities for lodging large numbers of people, with churches, hotels, and motels

also likely to function as mass care facilities during large-scale disasters. The proposed project would not interfere with operation of any emergency shelters and would not permanently close off or otherwise alter any existing streets, and therefore would not create any obstructions to potential evacuation routes that might be used in the event of an emergency.

During construction any temporary lane closures would be coordinated with local agencies and as specified in Transportation and Traffic Mitigation Measure T-1 (Construction Traffic Control Plan) (see Section 5.16, Traffic and Transportation). Additionally, any temporary road closures would follow applicable regulations and would not impede emergency response. Adherence to the City's EOP, coupled with implementation of mitigation measure MM T-1 during construction would ensure that the project would not impair the implementation of or physically interfere with an adopted emergency response or evacuation plan; therefore, the impact that would occur related to emergency response during construction would be less than significant.

Mitigation Measure for Interference with an Adopted Emergency Response Plan or Emergency Evacuation Plan

MM T-1 **Construction Traffic Control Plan** [See Section 5.16.2 (Traffic and Transportation) for complete text of the mitigation measure.]

NO IMPACT – OPERATION AND MAINTENANCE. Operation and maintenance of the proposed project would not affect public roads or increase demands on existing emergency response services and would therefore have no impact on adopted emergency response plans or emergency evacuation plans.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

NO IMPACT. The proposed project is in an urban setting with no risk of wildland fire owing to the lack of extensive vegetation in the area. The City of Santa Clara area is not located in a Fire Hazard Severity Zone (FHSZ) as designated on CAL FIRE wildland fire hazard maps (CAL FIRE, 2021).

Operation and maintenance activities would be incorporated into SVP's existing O&M schedule for the existing substations and associated facilities. As with current operation and maintenance, SVP would comply with all current federal and State laws related to vegetation clearance and fire prevention. Therefore, the project would have no direct or indirect impacts related to exposure of people to wildland fires (see also Section 5.20, Wildfire). No mitigation would be required.

5.10 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.10.1 Setting

Surface Waters and Drainage

Saratoga Creek is located adjacent to the north side of the substation property. Surface water drainage in the City of Santa Clara is primarily to the Guadalupe River (east of the proposed project area), San Tomas Aquino Creek (north of the proposed project area), Saratoga Creek (directly north of the proposed project area), and Calabazas Creek (northwest of the proposed project area) (City of Santa Clara, 2014). Saratoga Creek is the closest drainage to the proposed project area, located directly north of the proposed project site. The project site drains to the Saratoga Creek within the San Tomas Watershed. Saratoga Creek is listed as an impaired water body by the State Water Resource Control Board (SWRCB) 303 (d) list for diazinon (a pesticide) and trash; the diazinon TMDL listing is from 2007 and is being addressed by the USEPA approved San Francisco Bay Urban Creeks Diazinon TMDL and the trash is being addressed by implementing the trash control provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SWRCB, 2022).

All of the streams originate in the Santa Cruz Mountains, which are largely undeveloped. These streams drain northward across Santa Clara Valley to discharge into San Francisco Bay. Within the City of Santa Clara, these regionally important streams have been substantially channelized and modified to reduce flood hazards. The City of Santa Clara has a storm drainage system that consists of curb inlets that collect and channel surface water, such as rainwater, into a series of pipelines beneath City's roadways. The storm-water is transported through the underground pipelines to the 4 streams within the City. These streams then directly flow into the San Francisco Bay (City of Santa Clara, 2014).

Groundwater Resources

The Santa Clara Valley is primarily underlain by the Santa Clara Valley groundwater basin, which is divided into three subbasins: the San Mateo Plain, the Niles Cone, and the Santa Clara subbasins (DWR, 2022). The proposed project site, in the southwest section of the City of Santa Clara, is within the Santa Clara Subbasin. The Santa Clara Subbasin is approximately 240 square miles, covering the middle and southern end of the Santa Clara Basin. The water bearing formations of the Santa Clara subbasin include Plio-Pleistocene age Santa Clara Formation of and Pleistocene to Holocene younger alluvium (DWR, 2003). Water production well depths in the Santa Clara Valley average about 278 feet below the ground surface and yield an average of 425 gallons per minute (City of Santa Clara, 2014).

In contrast to other areas adjacent to San Francisco Bay, where saltwater intrusion has been an issue, total dissolved solids in the groundwater have not been a concern for the City of Santa Clara. Nitrates have also not been a problem and are below one-half of allowable levels in water extracted from the City's wells. However, manganese, a naturally occurring metal in groundwater, has been detected at one well, resulting in the City installing a manganese removal system for that well before putting it into production (City of Santa Clara, 2014). Water quality in the major producing aquifers in the subbasin is generally sodium and calcium bicarbonate and, although hard, is of good to excellent quality and suitable for most uses (DWR, 2003).

Flood Hazard Areas

Saratoga Creek is adjacent to the north side of the project site. On Federal Emergency Management Agency (FEMA) flood maps (FEMA,2020), Saratoga Creek is shown as Zone A, subject to a 1 percent chance of flooding in any given year (i.e., the 100-year flood). The substation site is outside of this zone.

According to the City of Santa Clara General Plan from 2010, Figure 5.10-2, the proposed project site is not within the Anderson Dam or Lexington Dam inundation areas, nor is it vulnerable to seal level rise or in a special food hazard zone.

The proposed project site is within a FEMA 500-year floodplain and is described as an area of 0.2% annual chance of flooding. The proposed project site is noted as being protected by a levee and categorized as part of the FEMA Flood Zone X that corresponds to Moderate to Low Risk Areas.

Water Supply

Potable water for the City of Santa Clara comes from a combination of sources: City of San Francisco's Hetch Hetchy aqueduct system, Santa Clara Valley Water District, and groundwater from City-owned wells. Groundwater comprises almost 70 percent of the City's water supply. Recycled wastewater is also used in the City for certain landscape irrigation, industrial, and construction purposes (City of Santa Clara, 2014).

Regulatory Background

Federal

Clean Water Act. The Clean Water Act (CWA; 33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is delegated to, and administered by, California's nine Regional Water Quality Control Boards (RWQCB). In addition, the State Water Resources Control Board (SWRCB) regulates the NPDES stormwater program. The proposed project is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (Region 2) and the SWRCB.

Projects that disturb one or more acres are required to obtain NPDES coverage under the California General Permit for Discharges of Storm Water Associated with Construction Activity. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP describes Best Management Practices (BMPs) the discharger will use to protect stormwater runoff. The SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs.

Section 401 of the CWA requires that any activity, including river or stream crossing during road, pipeline, or transmission line construction, which may result in discharges into a State waterbody, must be certified by the RWQCB through the issuance of a Waste Discharge Requirement. This certification ensures that the proposed activity does not violate State or federal water quality standards. The limits of nontidal waters extend to the Ordinary High Water Mark (OHWM), defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. The U.S. Army Corps of Engineers (USACE) may issue either individual, site-specific permits or general, nationwide permits for discharge into U.S. waters. A Water Quality Certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or waiver thereof) from the Central Valley RWQCB and/or the Lahontan RWQCB.

Section 303(d) of the CWA (CWA, 33 USC 1250, et seq., at 1313(d)) requires states to identify impaired waterbodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of Total Maximum Daily Load (TMDL) requirements. A TMDL is the maximum amount of a pollutant that a particular waterbody can receive while still meeting water quality standards, or an allocation of that water pollutant deemed acceptable to receiving waters. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

State

Porter-Cologne Water Quality Control Act. The Porter Cologne Water Quality Control Act of 1967, Water Code Section 13000 et seq., requires the SWRCB and the nine RWQCBs to adopt water quality criteria to

protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the project area are contained in the Water Quality Control Plan (also referred to as a Basin Plan) for the San Francisco RWQCB. Constraints in the water quality control plans relative to the proposed project relate primarily to the avoidance of altering the sediment discharge rate of surface waters, and the avoidance of introducing toxic pollutants to the water resource. A primary focus of water quality control plans is to protect designated beneficial uses of waters. In addition, anyone proposing to discharge waste that could affect the quality of the waters of the state must make a report of the waste discharge to the Regional Water Board or State Water Board as appropriate, in compliance with Porter-Cologne.

California Water Code Section 13260. California Water Code Section 13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCB. Any actions related to the proposed Project that would be applicable to Section 13260 would be reported to the San Francisco RWQCB, as applicable.

Local

Water Policies. The purpose of the City's water policies is off-set increased demand associated with the implementation of the City General Plan. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.4-P1.** Promote water conservation through development standards, building requirements, landscape design guidelines, education, compliance with the State Water Conservation Landscaping Ordinance, incentives, and other applicable City-wide policies and programs**.**
- **Policy 5.10.4-P4.** Require an adequate water supply and water quality for all new development.
- **Policy 5.10.4-P5.** Prohibit new development that would reduce water quality below acceptable State and local standards.
- **Policy 5.10.4-P10.** Work with Santa Clara Valley Water District to minimize undesirable compaction of aquifers and subsidence of soils.

Safety Policies. The purpose of the City's safety policies is to identify potential hazards and measures that can lessen risks for the City's population and property. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.5-P11.** Require that new development meet stormwater and water management requirements in conformance with State and regional regulations.
- **Policy 5.10.5-P13.** Require that development complies with the Flood Damage Protection Code.
- **Policy 5.10.5-P14.** Coordinate with the Federal Emergency Management Agency to ensure appropriate designation and mapping of floodplains.
- **Policy 5.10.5-P16.** Require new development to implement erosion and sedimentation control measures to maintain an operational drainage system, preserve drainage capacity and protect water quality.
- **Policy 5.10.5-P21.** Require that storm drain infrastructure is adequate to serve all new development and is in place prior to occupancy.
- **Policy 5.10.5-P22.** Regulate development on sites with known or suspected contamination of soil and/or groundwater to ensure that construction workers, the public, future occupants and the environment are adequately protected.

5.10.2 Environmental Impacts and Mitigation Measures

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Disturbance of soil during construction could result in soil erosion and lowered water quality through increased turbidity and sediment transport into the storm drain system or from incidental overland storm flow into the nearby Saratoga Creek. There are no water-courses or other water bodies within the proposed project site. Drainage from the site is directed to the municipal storm drain system which flows to Saratoga Creek and eventually flows into San Francisco Bay.

During construction, there is also the potential for violations of water quality standards or waste discharge requirements to occur as a result of accidental leaks, spills, or releases of hazardous or potentially hazardous materials. There also is a potential for violations if existing contamination is encountered during construction.

The project site is approximately 1.2 acres. It is assumed that most of the site would be disturbed during construction, triggering the need for a SWPPP. Implementation of mitigation measure MM HYD-1 would ensure that erosion control best management practices (BMPs) would be in place to reduce potential water quality impacts to a less than significant level whether or not a SWPPP is triggered by State law. In addition to mitigation measure MM HYD-1, complying with applicable water quality standards, including obtaining and adhering to any required water quality permits, would offer sufficient protection to avoid significant adverse impacts to water quality from erosion and sedimentation. Applicable water quality standards and regulations are described above, in Section 5.10.1.

In the event of an accidental spill, adherence to regulatory standards and regulations, as well as implementation of mitigation measure MM HM-1 (Hazardous Substance Control and Emergency Response) (see Section 5.9), would collectively ensure that a suite of BMPs would be applied to minimize the potential for an accidental release of hazardous materials to occur, to quickly and effectively address any such leak, and to quickly and effectively respond to any existing contamination produced or encountered during construction. The intent of regulatory standards is to prevent degradation of water quality to the point where beneficial uses would be impaired. Therefore, potential impacts to water quality standards or waste discharge requirements or other substantial degradation of surface or groundwater quality during construction would be less than significant with implementation of mitigation measures HYD-1 and HM-1 and compliance with regulatory standards. With these compliances, no violations would result from operation of the proposed project.

Mitigation Measures for Water Quality

MM HYD-1 **SWPPP or Erosion Control Plan Development and Implementation**. Following project approval, SVP will prepare and implement a SWPPP, if required by State law, or erosion control plan to minimize construction impacts on surface water and groundwater quality. Implementation of the SWPPP or erosion control plan will help stabilize graded areas and reduce erosion and sedimentation. The plan will designate BMPs that will be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, covers, and silt fences, will be installed before the onset of winter rains or any anticipated storm events. Suitable stabilization measures will be used to protect exposed areas during construction activities, as necessary. During construction activities, measures will be in place to prevent contaminant discharge.

The project SWPPP or erosion control plan will include erosion control and sediment transport BMPs to be used during construction. BMPs, where applicable, will be designed by using specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as properly containing stockpiled soils.

Erosion control measures identified will be installed in an area before construction begins during the wet season and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, will remain in place until disturbed areas have stabilized. The plan will be updated during construction as required by the SWRCB.

A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials management and spill response. Compliance with these requirements will be ensured by the on-site construction contractor.

MM HM-1 **Hazardous Substance Control and Emergency Response** (see full text in Section 5.8, Hazards and Hazardous Materials)

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

LESS THAN SIGNIFICANT. Groundwater supplies could be adversely affected through direct consumption of groundwater resources or indirect depletion of groundwater supplies such as through conducting dewatering activities where the water is not returned to the subsurface. In the case of the proposed project there would be minimal demand for water. A water truck may be on-site to support dust suppression during ground disturbing work. Alternatively, the existing hose bib on site may be used as a source of water to control dust. This would not result in a significant demand for water resources from the City of Santa Clara, where groundwater makes up 70 percent of the City's water supply. The existing supply is adequate for use during the 30-month duration of construction activities. Dewatering may be necessary if groundwater is encountered, but given the depth to the groundwater table, water encountered during project excavation would be shallow and local and dewatering would be for a limited temporary period of time. The small amount of dewatering would therefore not result in a substantial decrease of the groundwater supply or interfere substantially with groundwater recharge or sustainable groundwater management. The site is currently semi-impervious owing to the compacted stone covering. Installation of asphalt to replace the compacted stone groundcover as part of the proposed project would have minimal effect on groundwater recharge. Overall, any impacts to groundwater would be less than significant.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site;

LESS THAN SIGNIFICANT. The proposed project has no potential to alter the course of a stream or river, nor to substantially alter the existing drainage pattern of the site or area. The site has been previously graded and paved with compacted stone. The proposed project would regrade the site and pave it with asphalt. This would result is a somewhat more impervious ground cover compared to existing conditions. The change would be slight compared to the impervious area of the site currently and of the surrounding

building roofs, streets, sidewalks, and parking lots. The proposed project would therefore have a less than significant impact on drainage patterns or runoff generation and would not create on- or off-site erosion or siltation.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

LESS THAN SIGNIFICANT. As described under Item (c)(i) above, the project site is covered with compacted stone. The project would pave the site in asphalt. This would have a less than significant impact on drainage patterns or runoff generation. The site would drain to the existing stormwater drainage system. If required based on engineering studies, on-site detention would be provided to control the rate of runoff entering the stormwater drainage system. Impacts on flooding would therefore be less than significant.

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

LESS THAN SIGNIFICANT. As discussed above, the project will not substantially increase the rate or amount of runoff. If required based on engineering studies, on-site detention would be provided. Existing or planned stormwater drainage systems would therefore not be adversely affected. Except as described under Item (a) above, the project has no features that would generate substantial polluted runoff. This impact would be less than significant.

(iv) impede or redirect flood flows?

LESS THAN SIGNIFICANT. The proposed project is within a 500-year floodplain and adjacent to a FEMA-designated Special Flood Hazard Area (Zone A along Saratoga Creek, a 100-yer floodplain). Construction of a wall around the substation site would be within the 500-year floodplain and would not pose a substantial obstruction to flood flows such that flood flows would be impeded or redirected in any substantial way; therefore, the impact would be less than significant.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

LESS THAN SIGNIFICANT. The proposed project site is not subject to the effects of a tsunami and is not near a waterbody that would create seiche effects. The site is located within a 500-year floodplain and adjacent to a 100-year flood plain (Saratoga Creek). The electrical equipment on the site would be elevated above flood level and, therefore, would not pose a risk of pollutant release due to inundation. This impact is less than significant.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

LESS THAN SIGNIFICANT. As described in Item (a) above, the project effect on water quality would be less than significant with mitigation. Although nearby Saratoga Creek is listed as an impaired water body, there are no features of the project that would adversely impact the diazinon or trash load of the creek. There are no features of the project that would otherwise generate water quality impairments, nor are there any components of the project construction or use that could otherwise conflict with the implementation of a water quality control plan. The project will have minimal water use, mainly during construction, which will be obtained from local water purveyors. There are no features of the project that would otherwise have any effect on groundwater management. Therefore, this impact is less than significant.

5.11 Land Use and Planning

LAND USE PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.11.1 Setting

The proposed project would be located in a developed area in the southeastern part of the City of Santa Clara. The proposed project area and the local vicinity are dominated by commercial, residential, public open spaces, and mixed-use land uses. These are zoned as Neighborhood Mixed Use, Low and Medium Density Residential, Parks/Open Space, and Public or Quasi-Public (City of Santa Clara 2014a, Figure 5.2-2). Neighborhood Mixed Use is intended for pedestrian-oriented development, with a focus on ground-level neighborhood-serving retail along street frontages and residential development on upper floors. Low and Medium Density Residential designations are intended for residential developments ranging from 8 to 19 units per gross acre for Low Density, and 20 to 36 per gross acre for Medium Density. Low Density Residential may include detached or attached dwelling units, and include single-family dwelling units, townhouses, rowhouses, and combinations of these types. Medium Density Residential accommodates a range of housing and building types, ranging from low-rise apartments, townhouses and rowhouses with parking. This zoning is intended for areas with access from collector or arterial streets or in close proximity to neighborhood centers and mixed uses. Parks/Open Space designations are intended for improved and unimproved park and open space facilities, such as neighborhood, community, and regional parks, public golf courses, recreational facilities, and nature preserves. Public or Quasi Public designations allow a variety of public and quasi-public uses, including government offices, fire and police facilities, transit stations, commercial adult care and childcare centers, religious institutions, schools, cemeteries, hospitals and convalescent care facilities, places of assembly, and other facilities that have a unique public character as their primary use. (City of Santa Clara, 2014b)

Regulatory Background

This section includes a description of the land use and planning regulatory framework. No federal or State regulations or policies related to land use and planning are applicable to the project.

Local

City of Santa Clara General Plan. The City's land use policies consider the effects of development to public facilities and infrastructure. The following policy in the General Plan generally relates to the proposed project (City of Santa Clara, 2014b):

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

- **Policy 5.3.1-P11.** Allow new public/quasi-public uses under any General Plan Land Use classification, provided that the use is compatible with planned uses on neighboring properties, consistent with other applicable General Plan policies, and has primary access from a Collector or larger roadway. Such uses not associated with government operations are prohibited in areas designated as Light Industrial or Heavy Industrial, and in areas designated High or Low Intensity Office/Research and Development outside the Exception Area.
- **Policy 5.3.1-P15.** Require new developments and major public infrastructure projects to include adequate rights-of-way to accommodate all modes of transportation.
- **Policy 5.3.1-P17.** Promote economic vitality by maintaining the City's level of service for public facilities and infrastructure, including affordable utilities and high quality telecommunications.
- **Policy 5.3.1-P28.** Encourage undergrounding of new utility lines and utility equipment throughout the City.

5.11.2 Environmental Impacts and Mitigation Measures

a. Would the project physically divide an established community?

LESS THAN SIGNIFICANT. The rebuilt Homestead Substation would be within an existing substation property. The site is behind existing commercial and residential properties and is not adjacent to a public road. The project would not physically divide an established community. Construction work would be within the property and would require delivery and removal of equipment and material during the 30-month construction period. Off-site traffic would be consistent with the existing traffic types. Temporary lane closures, if needed, would be coordinated with local agencies. Given the construction duration and SVP's coordination with local agencies should temporary lane closure be needed, there would be a less than significant impact to the local established community as a result of the construction of the proposed project. An established community would not be divided and no mitigation is required.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

NO IMPACT. The proposed project would be consistent with the policies of the City of Santa Clara General Plan, as listed above in Section 5.11.1, Setting. As discussed in Sections 5.1, Aesthetics, and 5.11, Noise, the project would have less than significant visual and noise impacts. SVP shall obtain all applicable ministerial permits prior to commencing project activities. The removal of the existing limited site vegetation would be undertaken in consultation with the City Arborist. The proposed project does not cause an environmental impact due to a conflict with any applicable land use plans, policy, or regulation.

5.12 Mineral Resources

MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.12.1 Setting

Mineral resources of significance found and extracted in Santa Clara County include construction aggregate deposits and salts derived from evaporation ponds at the edge of San Francisco Bay (City of Santa Clara, 2014). A review of U.S. Geological Survey (USGS) data indicate that the proposed project would not be in a classified mineral resource zone (MRZ) and there are no known important mineral resources or active mining operations in the immediate vicinity of the proposed project (DOC, 2021a; USGS, 2021).

Regulatory Background

This section includes a description of the regulatory framework for mineral resources. There are no federal or local regulations associated with mineral resources that are relevant to the proposed project.

State

California Surface Mining and Reclamation Act of 1975 (SMARA). SMARA requires that the State Geologist classify land into Mineral Resource Zones (MRZs) according to the known or inferred mineral potential of the land. The California Department of Conservation's Office of Mine Reclamation (OMR) and the State Mining and Geology Board (SMGB) are jointly charged with administration of the Act's requirements. The OMR provides technical assistance to lead agencies and operators, maintains a statewide database of mine locations and operational information, and is responsible for matters involving SMARA compliance. The SMGB promulgates regulations to clarify and interpret SMARA requirements in addition to serving as a policy and appeals board (DOC, 2021b). The SMGB has the authority to further regulate the authority of the local agencies if it finds that the agencies are not in compliance with the provisions of SMARA.

Mineral resources have been mapped using the California Mineral Land Classification System, which include the following four MRZs:

- **MRZ-1**: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence;
- **MRZ-2**: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence;
- **MRZ-3**: Areas containing mineral deposits, the significance of which cannot be evaluated; and
- **MRZ-4**: Areas where available information is inadequate for assignment to any other zone.

5.12.2 Environmental Impacts and Mitigation Measures

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. The proposed project and the surrounding vicinity are not located within a classified Mineral Resource Zone and there are no known important mineral resources that would be impacted by the project. Therefore, the project would not result in the loss of availability of a known mineral resource of value to the region or State.

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 stated above, there are no designated Mineral Resource Zones in the proposed project vicinity and there are no known important mineral resources that would be impacted by the project. Therefore, the project would have no impact on any locally important mineral resource recovery sites.

5.13 Noise

NOISE Would the project result in:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.13.1 Setting

Existing Conditions

Community Noise. To describe environmental noise and to assess project impacts on areas that are sensitive to community noise, a measurement scale that simulates human perception is used. The A-weighted scale of frequency sensitivity accounts for the sensitivity of the human ear, which is less sensitive to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. Decibels are logarithmic units that can be used to conveniently compare wide ranges of sound intensities.

Community noise levels can be highly variable from day to day as well as between day and night. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour day-night period (Ldn). The Leq, or equivalent sound level, is a single value (in dBA) for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually one hour. The L50, is the median noise level that is exceeded fifty per cent of the time during any measuring interval. The Ldn, or day-night average sound level, is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to nighttime sounds occurring between 10:00 p.m. and 7:00 a.m. Community Noise Equivalent Level (CNEL) is another metric that is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. To easily estimate the day-night level caused by any noise source emitting steadily and continuously over 24-hours, the Ldn is 6.4 dBA higher than the source's Leq. For example, if the expected continuous noise level from equipment is 50.0 dBA Leq for every hour, the day-night noise level would be 56.4 dBA Ldn.

Community noise levels are usually closely related to the intensity of human activity. Noise levels are generally considered low when below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, the Ldn noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas, and levels up to 85 dBA occur near major freeways and airports. Although

people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse to public health.

Surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than what would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments are about seven decibels lower than the corresponding daytime levels. In rural areas away from roads and other human activity, the day-to-night difference can be considerably less. Areas with full-time human occupation and residency are often considered incompatible with substantial nighttime noise because of the likelihood of disrupting sleep. Noise levels above 45 dBA at night can result in the onset of sleep interference. At 70 dBA, sleep interference effects become considerable (U.S. EPA, 1974).

Noise Environment in the Project Area. The project area includes land uses that are primarily residential, commercial, and recreational. The major arteries of Kiely Boulevard and Homestead Road near the project site cause traffic noise levels that exceed 75 dBA CNEL along the edges of the roads (City of Santa Clara, 2014; General Plan Figure 5.10-4).

Noise Sensitive Areas. A diverse range of land uses are within 0.5 miles of the project, including areas with high, medium, and low density residential commercial, and community-serving parks/open space. Residential uses occur on parcels adjacent to the project site and in the project vicinity. The nearest residences (townhomes) to the west are approximately 25 feet from proposed project activity. The rear yards of townhomes abut the project site and are separated from the site by a wall. Residences (two-story apartments) to the south are approximately 40 feet from the substation site boundary, and are separated from the site by a parking area and parking access road. A large four-story apartment complex is approximately 300 feet north of the site and is separated by parkland. Additionally, a Montessori school on Kiely Boulevard is near the southeast corner of the site. Project-related work areas would be within 100 feet of land uses containing sensitive receptors to the south and west of the site.

Regulatory Background

Regulating environmental noise is generally the responsibility of local governments. The U.S. EPA once published guidelines on recommended maximum noise levels to protect public health and welfare (U.S. EPA, 1974), and the State of California maintains recommendations for local jurisdictions in the General Plan Guidelines published by the Governor's Office of Planning and Research (OPR, 2017). The following summarizes the local requirements.

The City of Santa Clara City Code. The City Code generally prohibits "loud and unreasonable noise" as a nuisance if it may disturb the peace "between the hours of 10:00 p.m. and 7:00 a.m." including specifically noise that is "made within two hundred fifty (250) feet of any building or place regularly used for sleeping purposes" (Section 9.05.010). However, Section 9.10.070(d) of the City Code exempts operation of City-owned electric utility system facilities, including substation equipment, from the Noise Ordinance.

The City's Noise Ordinance (Chapter 9.10) includes exterior noise limits that must not be exceeded at receiving land uses, for noise generated by any fixed source of noise. Construction activities that occur during allowed hours and noise from city-owned electric facilities are exempt from the noise and vibration standards of the Noise Ordinance (Section 9.10.070). For construction that is "off-street" and within 300 feet of a residentially zoned property, construction activities shall be limited to occur within the hours of 7:00 a.m. to 6:00 p.m. on weekdays that are not holidays or within the hours of 9:00 a.m. to 6:00 p.m. on Saturdays that are not holidays (Section 9.10.230).

City of Santa Clara General Plan. The Environmental Quality chapter of the General Plan (City of Santa Clara, 2014) includes policies to encourage land uses that are compatible with areas of higher noise levels and to protect noise sensitive land uses in areas where existing ambient noise levels are high, as follows:

- **Policy 5.10.6-P1.** Review all land use and development proposals for consistency with the General Plan compatibility standards and acceptable noise exposure levels defined on Table 5.10-1.
- **Policy 5.10.6-P2.** Incorporate noise attenuation measures for all projects that have noise exposure levels greater than General Plan "normally acceptable" levels, as defined on Table 5.10-1.
- **Policy 5.10.6-P3.** New development should include noise control techniques to reduce noise to acceptable levels, including site layout (setbacks, separation and shielding), building treatments (mechanical ventilation system, sound-rated windows, solid core doors and baffling) and structural measures (earthen berms and sound walls).
- **Policy 5.10.6-P4.** Encourage the control of noise at the source through site design, building design, landscaping, hours of operation and other techniques.
- **Policy 5.10.6-P5.** Require noise-generating uses near residential neighborhoods to include solid walls and heavy landscaping along common property lines, and to place compressors and mechanical equipment in sound-proof enclosures.
- **Policy 5.10.6-P6.** Discourage noise sensitive uses, such as residences, hospitals, schools, libraries and rest homes, from areas with high noise levels, and discourage high noise generating uses from areas adjacent to sensitive uses.

5.13.2 Environmental Impacts and Mitigation Measures

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

LESS THAN SIGNIFICANT – CONSTRUCTION. The proposed project would require a 30-month duration of construction activities that include mobilizing construction equipment, crews, and materials, excavating holes for poles, installing concrete foundations, and installing poles and equipment. The construction activities would require use of vehicles and heavy-duty equipment capable of generating noise within the substation site and along the roads used to access the site. Along with on-highway vehicles including trucks, the following types of construction equipment could be used at the site: auger, backhoe or loader, crane, compactor, small welder, pump and generator. Outside of the site, traffic noise would be caused by vehicles transporting equipment and materials to the site, trucks removing construction-related debris, and workers commuting to and from the work site.

Construction would temporarily increase the noise levels near the substation site. Construction would be similar to other construction in an urban environment and, to the extent feasible, would occur between 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. Limited work, such as tying in new lines, may be required at night to avoid disrupting daytime electric service. The surrounding land uses are primarily residential, commercial, and recreational. As shown on Figure 4.1 (Homestead Substation Location), residences are to the south and west of the site; a commercial area including a small Montessori school is to the east and southeast, and Saratoga Creek and an urban recreational space is to the north.

The townhome residences on Creekside Place are adjacent to the west side of the project site. Homes at the north end of Creekside Place would be approximately 25 feet from where the proposed substation

control enclosure would be erected within the substation wall. Other parts of the substation site would be more distant, as shown on Figure 4.3 (Homestead Substation Rebuild Layout). Two apartment complexes fronting on Homestead Road are south of and adjacent to the project site. The apartments are approximately 40 feet from the substation site boundary, with a carport and driveway separating the buildings and the substation. The school to the southeast of the substation is approximately 75 feet from the substation property line, although the school is over 100 feet from where most construction would occur.

Table 5.13-1 summarizes the typical noise levels for individual pieces of construction equipment.

Table 5.13-1. Typical Noise Levels for Individual Construction Equipment

Equipment	Typical Lmax (dBA, at 50 ft)	Typical Leq (dBA, at 50 ft)
Auger, drill rig	84	77
Backhoe	78	74
Crane	81	73
Compactor	83	76
Excavator	81	77
Generator	81	78
Pump	81	78
Dump truck, haul truck, concrete mixer truck	76-79	73-76
Pickup truck, crew truck	75	62-71

Source: FHWA, 2006.
Lmax: Maximum noise level from Actual Measured in Roadway Construction Noise Model.
Leq: Equivalent noise level for one hour incorporating the Acoustical Usage Factor.

Construction activities would create both intermittent and continuous noises during the workday. Intermittent noise would be caused by periodic, short-term equipment operation. For example, the auger or excavator would be used cyclically during the limited phases of creating foundations or below grade trenching. Continuous noise would emanate from equipment operation over longer periods, such as steady use of a pump or generator.

Typical equipment noise levels and equipment usage factors are published by in the federal Roadway Construction Noise Model, User's Guide (FHWA, 2006). For a collected group of equipment at the construction site, the maximum intermittent noise levels would typically range from 84 to 90 dBA at 50 feet. These would be the highest levels expected, and these could occur during installation of foundations or the below grade excavation. At 50 feet, continuous noise levels could range up to about 83 dBA. Because sound fades over distance, these levels would diminish over additional distance and could be reduced further by intervening structures. At 100 feet from the equipment, continuous noise levels could range up to 77 dBA and at 200 feet, up to 71 dBA.

Construction would also cause noise away from work areas, primarily from commuting workers and from trucks needed to bring materials to the site. Haul trucks would make trips to bring poles, new substation equipment, and other materials to the construction site and remove excavated soil and waste. The noise levels associated with passing trucks and commuting worker vehicles would be approximately 71 to 76 dBA at 50 feet, and vehicular noise would be concentrated at the Kiely Boulevard entrance to the substation.

Construction noise would affect the locations closest to the substation and work areas and along the routes used by haul trucks and other construction traffic. The surrounding land uses would experience a temporary increase in noise above the conditions that exist without the project. However, the intermittent and variable nature of construction noise limits the potential for adverse effects such as annoyance to be experienced by off-site receptors, and sleep interference would not be a concern because activities would occur during daylight hours. Incremental noise from construction vehicles and traffic noise would not represent a substantial increase in the context of the project’s surrounding land uses and the existing noise levels.

SVP would take routine precautions to avoid creating unnecessary noise. To the extent possible, construction traffic and material delivery would be routed away from residential areas by entering the site from

Kiely Boulevard in a commercial area. The construction noise levels would be compatible with the setting of existing land uses and ambient noise levels and would pose no conflict with City of Santa Clara policies regarding compatibility of land uses with noise levels. Project construction noise during daytime hours would be exempt from the standards established in City Noise Ordinance. The construction noise impact under this criterion would be less than significant.

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. City-owned electric facilities are exempt from the noise and vibration standards of the Noise Ordinance (Chapter 9.10.070). Upon completing construction, the occasional nature of maintenance noise due to implementation of the proposed project would not result noise levels in excess of standards established in the local general plan or noise ordinance. The proposed project would replace two existing power transformers with three new low-profile transformers. Existing noise sources that would be replaced with new equipment include the power transformers and fans for cooling the transformer oil, which run as needed depending on the operating and ambient temperatures. Permanent increases in ambient noise levels in the project vicinity would not occur, and the replacement equipment associated with the substation improvements would not be likely to generate a new or different source of permanent noise compared with existing conditions. On-site improvements with the proposed project include replacing the existing perimeter fence with a masonry block screening wall 13 feet high around the entire site, consistent with the City's General Plan policies for noise generating land uses (Policy 5.10.6-P4 and Policy 5.10.6-P5). Operation and maintenance activities would be comparable to O&M of the existing facilities. This impact would be less than significant.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels generation of excessive groundborne vibration or groundborne noise levels?

LESS THAN SIGNIFICANT. Groundborne vibration levels from construction equipment and activities might be perceptible to receptors in the immediate vicinity of the substation and work areas. The activity that would be most likely to cause groundborne vibration would be the passing of heavy trucks on uneven surfaces. The impact from construction-related groundborne vibration would be short-term and confined to only the immediate area around activities (within about 25 feet). Except wall construction and paving, most work within the substation site would be more than 25 feet from residences. No homes would be exposed to excessive vibration, and the impact during construction would be less than significant.

Equipment associated with operation and maintenance of the proposed project would not produce any groundborne noise or vibration; therefore, operation and maintenance of the project would result in no impact under this criterion.

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

NO IMPACT. The proposed project would be located approximately 3 miles southwest of the San Jose International Airport and 5.7 miles southeast of Moffett Field. The proposed project would be unstaffed, and the project would not expose people to noise from the airports. There are no private airstrips located within 2 miles of the project, therefore the project would have no impact under this criterion. As such, the proposed project would not expose people to excessive noise from aircraft, and there would be no impact.

5.14 Population and Housing

POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Induce substantial unplanned 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)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.14.1 Setting

The project site currently is surround by a mix of residences, businesses, and recreation. Overall, this area of the City of Santa Clara is substantially built out and land use density has increased over time. Substantial increases in population can be achieved only by development of higher density housing, either on vacant land or through redevelopment of existing land uses. The City is planning on increasing the density of land uses along selected major thoroughfares in the City.

Table 5.14-1 provides existing conditions for the County of Santa Clara and the City of Santa Clara.

Table 5.14-1. Year 2020 Existing Conditions – Population, Housing, and Employment: City of Santa Clara and County of Santa Clara

		Housing Units		Employment	
Location	**Population**	**Total Units**	**Vacancy Rate**	**Total Employed***	**Unemploy-ment Rate**
City of Santa Clara	130,746	51,041	5.4%	71,200	3.2%
County Santa Clara	1,934,171	680,298	4.6%	1,034,500	3.7%

*Accounts for population greater than 16 years of age and in Labor Force.
Source: CA DOF, 2021; CA EDD, 2021

Regulatory Background

This section includes a description of the population and housing regulatory framework. There are no federal or state regulations, plans, and standards for population and housing that apply to the proposed project.

City of Santa Clara General Plan. The purpose of the City's housing policies is to plan for an adequate variety of safe, appropriate, and well-built housing for all residents of Santa Clara (City of Santa Clara, 2014b). The following policy from the City of Santa Clara General Plan and the Housing Element of the General Plan, respectively, generally relate to the proposed project (City of Santa Clara, 2014a and 2014b):

- **Policy 5.3.1-P5.** Implement a range of development densities and intensities within General Plan land use classification requirements to provide diversity, use land efficiently and meet population and employment growth.

5.14.2 Environmental Impacts and Mitigation Measures

a. Would the project induce substantial unplanned 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 proposed project is in an urban area that is substantially developed. There would be no direct population growth induced by the project, as it would not provide new housing and would not require an expansion of the SVP workforce to service and maintain the rebuilt substation. During the 30-month construction period, the proposed project would provide short-term jobs for a small workforce. Construction needs are not anticipated to result in workers relocating to the area. The proposed project would generate neither a permanent increase in population levels nor a decrease in available housing.

The construction and operation of the rebuilt substation would facilitate future planned growth by ensuring reliable electricity to the area served by the substation and would result in an indirect effect of facilitating the development of the surrounding area of the City of Santa Clara. Greater electrical reliability would provide developmental and employment opportunities to the regional workforce. While the further development or redevelopment in the City of Santa Clara may induce some population growth, this has already been accounted for through the City's General Plan. Therefore, there would be a less than significant effect as a result of the proposed project.

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

NO IMPACT. The proposed project would be within an existing substation property and would not displace any housing or people and, therefore, would not necessitate the construction of replacement housing. Construction of the rebuilt substation would occur over approximately 30 months and would not require the relocation of workers to the region. Therefore, no impacts would occur.

5.15 Public Services

PUBLIC SERVICES

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:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.15.1 Setting

For the area where the proposed project would be located, public services, including fire and police services, as well as public and private schools, parks and recreational areas, and other public services, are provided by the City of Santa Clara, special districts, and private entities.

Fire Protection

The Santa Clara Fire Department (SCFD) serves the City of Santa Clara and provides fire protection to the project site and the surrounding area (City of Santa Clara, 2014). There are 10 fire stations throughout the City, with 179.5 paid personnel and 65 reserve employees. Each fire station has at least one 3-person engine or ladder-truck company (City of Santa Clara, 2014). The nearest fire station to the site is Fire Station 3, located within a few hundred feet, at 2821 Homestead Road The current SCFD response time standard is a three-minute average for all areas of the City (City of Santa Clara, 2014).

Police Protection

The Santa Clara Police Department (SCPD) serves the City of Santa Clara and provides police protection to the project site (City of Santa Clara, 2014). SCPD headquarters is located at 601 El Camino Real and is about 2.3 miles from the Homestead Substation site. SCPD has 239 full-time employees, including 159 sworn officers and 80 civilians (City of Santa Clara, 2021a), divided into 4 divisions (City of Santa Clara, 2021b). The average response time after dispatch is 2 minutes and 8 seconds (City of Santa Clara, 2021a).

Schools

The Santa Clara Unified School District operates public schools within the City of Santa Clara (City of Santa Clara, 2014). There are numerous private and parochial schools in the City as well. Children's World Bilingual Montessori School, San Jose Art Academy, and St. Justin Elementary School are within a 0.25-mile radius of the project site. Educational institutions in the general vicinity of the substation site and the distance from the substation to the school are listed below.

- Children's World Bilingual Montessori School (ages 3-6), 820 Kiely Boulevard, 220 feet southeast.
- San Jose Art Academy, 2905 Homestead Road, 500 feet southwest

- St. Justin Elementary School, 2655 Homestead Road, 0.15 miles east
- Millikan Basics + Elementary School, 615 Hobart Terrace, 0.36 miles south
- Millikan Elementary School, 2720 Sonoma Place, 0.38 miles northwest
- Santa Clara High School, 3000 Benton Street, 0.41 miles north
- Sutter Elementary School, 3200 Forbes Avenue, 0.52 miles southwest
- Neighborhood Christian Center (Pre-K), 887 Pomeroy Avenue. 0.54 miles west
- Stratford (K-8) School, 890 Pomeroy Avenue, 0.55 miles west

Parks

There are 40 parks and pools in the City of Santa Clara (City of Santa Clara, 2021c). The parks nearest the substation are:

- Bill Wilson, Jr. Park and the Central Park Annex playground, located just north of Saratoga Creek, which abuts the substation property
- Santa Clara Central Park located northeast of the substation, on the east side of Kiely Boulevard

Hospitals

The following hospitals are closest to the substation site:

- O'Connor Hospital, 2105 Forest Avenue, San Jose, CA, and about 2.3 miles to the southeast
- Kaiser Medical Center, 3550 El Camino Real, about 1.2 miles to the northwest
- Kaiser Permanente Hospital, 19000 Homestead Road, Cupertino, CA, about 1.4 miles west
- Kaiser Permanente Santa Clara Medical Center, 700 Lawrence Expressway, about 1 mile west

Regulatory Background

This section includes a description of the public services regulatory framework. There are no federal regulations associated with public services that are relevant to the proposed project.

State

2010 Strategic Fire Plan for California. The 2010 Strategic Fire Plan for California was developed in coordination with the State Board of Forestry and Fire Protection and CAL FIRE to reduce and prevent the impacts of fire in California. Goal 6 of the Plan sets objectives to determine the level of suppression resources (staffing and equipment) needed to protect private and public resources. Specific objectives include, but are not limited to, maintaining an initial attack policy which prioritizes life, property, and natural resources; determining suppression resources allocation criteria; analyzing appropriate staffing levels and equipment needs in relation to the current and future conditions; increasing the number of CAL FIRE crews for fighting wildfires and other emergency response activities; maintaining cooperative agreements with local, state, and federal partners; and implementing new technologies to improve firefighter safety, where available (State Board of Forestry and Fire Protection). The standards outlined are applicable to the SCFD serving the City of Santa Clara.

Local

City of Santa Clara General Plan. The purpose of the City's public services policies is to maintain the safety and security that is essential and integral to the quality of life in the City's community. The following policy in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.9.3-P1.** Encourage design techniques that promote public and property safety in new development and public spaces.

5.15.2 Environmental Impacts and Mitigation Measures

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:

a) Fire protection?

LESS THAN SIGNIFICANT. The rebuilt Homestead Substation would pose a minimal risk of fire. Facilities would be located on concrete pads or asphalt and would not be adjacent to other structures. Not additional fire services would be required beyond those attributable to the existing substation. A City fire station is located immediately south of the site, on Homestead Road.

The proposed project area would continue to be adequately supported by the existing fire protection services. Construction and operation of the proposed project would not induce growth in the project area that would create the need for a new facility and the fire risk from the proposed project would not create the need for new or physically altered fire protection facilities. In addition, operation and maintenance would not affect the ability of fire personnel to respond to fires. The majority of construction-related activities would be located away from major emergency access routes and not be expected to significantly interfere with emergency response times. Impacts on local or regional fire protection would be less than significant.

b) Police Protection?

LESS THAN SIGNIFICANT. The proposed project would not require police services during construction or operation and maintenance beyond routine patrols and response. As with fire services, discussed in Item (a) above, the construction and operation of the proposed project would not result in a need for additional police facilities or affect response times or other service performance. The majority of construction-related activities would be located away from major emergency access routes and not be expected to significantly interfere with emergency response times. The result would be a less than significant impact.

c) Schools?

NO IMPACT. The proposed project would not be expected to result in an increase in population within the area. The rebuilding of the Homestead Substation would occur over approximately 30 months and would not require the relocation of workers' families to the City of Santa Clara. There would not be an expected increase in families or in school-age children as a result of the temporary construction activities and any workers who might temporarily migrate to the area. After construction, SVP's existing maintenance and operations group would assume inspection, patrol, and maintenance duties as needed; therefore, no additional staff would be required after project construction work is completed. The proposed project would result in no impact related to requiring expanded schools.

d) Parks?

NO IMPACT. The proposed project would not increase the region's population. The rebuild of the Homestead Substation would take place over 30 months and would require only a small workforce of construction personnel working on any given day. While it is possible that workers traveling to the area may use existing public services or amenities such as parks, the potential increase in use and demand would be minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities.

Consequently, the project would not increase any long-term demands on existing parks in the project area, and no new or expanded park facilities would be required because of the proposed project.

e) Other Public Facilities?

NO IMPACT. The proposed project would not increase population and would not affect other governmental services or public facilities that would lead to the requirement of new or expanded facilities to be developed. Therefore, no impact on other public facilities is expected.

5.16 Recreation

RECREATION	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.16.1 Setting

There are 40 parks and pools in the City of Santa Clara (City of Santa Clara, 2021c). Two parks are located near the substation. Bill Wilson, Jr. Park and the Central Park Annex playground is located just north of Saratoga Creek, which abuts the north side of the substation property. Santa Clara Central Park is located northeast of the substation, on the east side of Kiely Boulevard

In general, each 1-square mile of residential area in the City of Santa Clara contains a neighborhood or community park located close to the center to ensure that almost all residents live within a 10-minute walk of a park (City of Santa Clara, 2014b).

Regulatory Background

This section includes a description of the recreation regulatory framework. There are no federal or State regulations associated with recreation that are relevant to the proposed project.

Local

City of Santa Clara General Plan. The objective of the City's public facilities and services policies is to maintain a high quality of life and livability in the City. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014a):

- **Policy 5.3.5-P3.** Encourage industrial development to participate in the identification and funding of 25 acres for park and recreational facilities to serve employment centers north of the Caltrain railroad tracks.
- **Policy 5.9.1-P16.** Encourage non-residential development to contribute toward new park facilities to serve the needs of their employees.

5.16.2 Environmental Impacts and Mitigation Measures

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?

NO IMPACT. The proposed project does not include development of new residential or commercial developments that would increase population and would not increase the demand for parks. The project would replace an existing substation within the current substation property. Construction would take place over 30 months and would require only a small workforce of construction personnel working on any given day.

While some workers may use nearby park facilities during project construction, increased use would be minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities. Therefore, there would be no impact.

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?

NO IMPACT. The proposed project does not include recreational facilities nor does it require the construction of new or expanded parks or recreational facilities that could create an adverse physical effect on the environment. There would be no impact.

5.17 Transportation

TRANSPORTATION Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d. Result in inadequate emergency access?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.17.1 Setting

The proposed project would use local roadways for accessing the site during construction. Baseline conditions of regional and local roadways likely used to access the proposed project area and work locations and those temporarily affected by proposed project construction activities are discussed below.

Highways

The following highways provide regional access to the project area (City of Santa Clara, 2014):

- **U.S. Highway (U.S.) 101**, specifically the section of U.S. 101 known as Bayshore Freeway, is an 8-lane divided (4 lanes per direction) south-north highway that travels the length of the West Coast. The San Tomas Expressway exit or the Great America Parkway/Bowers Avenue exit would likely be used to access the project area. At the San Tomas Expressway exit, the year 2020 average daily traffic (ADT) volumes on U.S. 101 were 169,000 vehicles per day. At the Great America Parkway/Bowers Avenue exit, the year 2020 ADT volumes on U.S. 101 were 174,000 vehicles per day (Caltrans, 2020). Year 2020 ADT volumes represent the most recently published data.
- **Interstate 280**, or Junipero Serra Freeway, is a 10-lane south-north regional highway that connects I-880 and SR-1 and extends south through the City. The Saratoga Avenue or the Lawrence Expressway exits would likely be used to access the project area. At the Saratoga Avenue exit, the year 2020 ADT volumes on I-280 were 170,000 vehicles per day. At the Lawrence Expressway exit, the year 2020 ATD volumes on I-280 were 141,000 vehicles per day (Caltrans, 2020).

Local Roads

Homestead Road and Kiely Boulevard and major arterials in the City and intersect near the project site. They provide access to the site and interconnect with other City arterials leading to expressways and regional highways.

Access Routes

Table 5.17-1 provides information on some primarily local travel routes that would likely be used by project-related vehicles to access the construction staging yards and the proposed project site. Details on access routes that would also be disrupted by project construction are discussed below under “Roadways

Disrupted by Project Construction" and are not repeated in Table 5.17-1. While the average daily traffic data provided in Table 5.17-1 are from 2011, it remains the most currently available ADT volume data for these roadways.

Table 5.17-1. Existing Local Roadway Conditions

Street	Lanes	ADT Volume
Homestead Road between Pomeroy Avenue and Kiely Boulevard	4	20,610
Homestead Road between Kiely Boulevard and San Tomas Expressway	4	14,330
Kiely Boulevard between Benton Street and Homestead Road	4	8,907
Kiely Boulevard between Homestead Road and Pruneridge Avenue	4	12,050
San Tomas Expressway between Benton Street and Homestead Road	8	52,160
San Tomas Expressway between Homestead Road and Pruneridge Avenue	8	43,490
Lawrence Expressway between Benton Street and Homestead Road	8	65,410
Lawrence Expressway between Homestead Road and Pruneridge Avenue	8	66,600

Source: City of Santa Clara, 2011.

Roadways Disrupted by Project Construction

Construction of the proposed project could result in a temporary disruption to local roadways during delivery of large equipment. The main roads that may require temporary lane closures and/or escort vehicles include:

- Homestead Road – a 4-lane arterial roadway located south of the project site and provides access from locations to the east and west.
- Kiely Boulevard – a 4-lane arterial roadway located east of the proposed project site, and provides access from the north and south.
- San Tomas Expressway –an expressway located east of the project site. The expressway is a major north/south roadway that connects residential uses in the south to key employment centers in the central and north areas of Santa Clara (City of Santa Clara, 2011).
- Lawrence Expressway – an expressway located west of the project site. The expressway is a major north/south roadway that connects residential uses in the south to key employment centers in the central and north areas of Santa Clara (City of Santa Clara, 2011).

Mass Transit

Bus. Existing public transit service within the City is primarily provided by Santa Clara Valley Transportation Authority (VTA) and consists of bus, light rail transit, and paratransit services. VTA bus routes 53 and 57 are located near the project (VTA, 2021a, 2021b).

- Route 57 travels on Kiely Boulevard, east of the project site. The following two bus stops are near the project and could be affected:
  - West side of Kiely Boulevard and south of Kaiser Drive.
  - West side of Kiely Boulevard and just south of the intersection with Homestead Road
- Route 53 travels on Homestead Road, south of the proposed project site. The following two bus stops are near the project and could be affected:
  - North side of Homestead Road and just east of the intersection with Kiely Boulevard
  - South side of Homestead Road and just east of the intersection with Kiely Boulevard

Passenger Rail. Existing commuter rail lines include Caltrain, operated by the Peninsula Joint Powers Board (JPB), and Altamont Commuter Express (ACE), operated by the San Joaquin Regional Rail Commission. Both stop at the Santa Clara Transit Station located approximately 2.5 miles east of the project site. The

Capitol Corridor commuter rail line, operated by the Capitol Corridor Joint Powers Authority (CCJPA), stops at the Great America Station, approximately 4.2 miles northeast of the project site, and provides transit services from Sacramento to San Jose through the City of Santa Clara.

Rail (Freight)

A limited number of freight trains and regularly scheduled passenger service use the railroad track daily within the City. Outside peak commuter rail periods, the Union Pacific Railroad (UPRR) provides freight operations within the Caltrain right-of-way (ROW). The Caltrain ROW traverses through the middle and downtown areas of the City of Santa Clara. The rail network includes grade-separated and at-grade railroad crossings. (City of Santa Clara, 2014)

Bicycle

Existing bicycle facilities are part of City of Santa Clara Bicycle and Trail Network. Bicycle and Trail Network provides connections between residential neighborhoods, employment, recreation, education, and transit centers within the City (City of Santa Clara, 2014). Bikeways are typically classified as Class I, II, or III facilities. Bike paths or trails (also known as Class I bikeways) operate within a right-of-way that is separated from vehicular traffic. Bike lanes (also known as Class II bikeways) are located within roadways, but are delineated by warning symbols and striping. Bike routes (also known as Class III bikeways) operate in the shoulder lane of roadways but are not delineated by striping. One Class II bikeway is located along Homestead Road (City of Santa Clara, 2013). Kiely Boulevard is identified as a “high caution” route for bicycles (VTA, 2020).

Air Transportation

The Norman Y. Mineta San Jose International Airport (Airport) is located to the east of, and adjacent to, the City of Santa Clara. The Airport is located approximately 3 miles northeast of the proposed project site. A private heliport, McCandless heliport is located over 3 miles north of the proposed project area.

Regulatory Background

State

California Vehicle Code (CVC). The CVC includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials.

State CEQA Guidelines, Section 15064.3, Determining the Significance of Transportation Impacts. In response to Senate Bill 743 (Steinberg, 2013), this provision states that “vehicle miles traveled” (VMT) is the most appropriate measure of transportation impacts in the CEQA process. For transportation impacts under CEQA, VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except for roadway capacity projects, a project’s effect on automobile delay would not constitute a significant environmental impact under CEQA. For instances where existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project’s VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate [14 CCR 15064.3(b)(3)].

Local

City of Santa Clara General Plan. The objectives of the City's mobility and transportation policies are to a safe, efficient, convenient, and integrated system to move people and goods and promote a reduction in the use of personal vehicles and vehicle miles traveled. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.8.2-P3.** Encourage undergrounding of utilities and utility equipment within the public right-of-way and site these facilities to provide opportunities for street trees and adequate sidewalks.
- **Policy 5.8.5-P1.** Require new development and City employees to implement transportation demand management programs that can include site-design measures, including preferred carpool and vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.

5.17.2 Environmental Impacts and Mitigation Measures

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. Project construction would occur in a highly urbanized setting and could therefore create impacts to public, private, and pedestrian transit in the project area. Some lane closures and/or traffic controls may be required to allow for certain construction activities such as delivery of oversized equipment and material. Construction itself would occur entirely within the proposed project site and would not affect modes of transport.

The Class II bike lane along Homestead Road south of the proposed project would not be affected. The proposed project would not permanently remove bicycle lanes or conflict with alternative transportation routes.

While construction traffic would create impacts, these impacts would be localized, temporary in nature, and would not change long-term traffic loads or patterns. Mitigation measure MM T-1 is proposed to provide specificity regarding the requirements of a Construction Traffic Control Plan. The purpose of this plan would be to reduce potential impacts to the circulation system from the closure/disruption of travel lanes. With the incorporation of this mitigation, construction would not conflict with programs, policies, plans, or ordinances regarding public roadway, transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

NO IMPACT – OPERATION AND MAINTENANCE. SVP's existing maintenance and operations group would assume inspection, patrol, and maintenance duties as needed. Typical maintenance activities involve both routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service continuity. No additional staff would be required after project construction work is completed. No substantial increase in traffic or traffic-related impacts would occur due to operation and maintenance activities.

Mitigation Measures for Transportation Impacts

MM T-1 **Construction Traffic Control Plan.** Prior to the start of construction, Silicon Valley Power (SVP) shall prepare and submit a Construction Traffic Control Plan for review and approval to the City of Santa Clara (City) Planning Department for public roads and transportation facilities that would be directly affected by the construction activities and/or would require permits and approvals. SVP shall submit the Construction Traffic Control Plan to the City

prior to conducting activities covered in the traffic control permits. The Construction Traffic Control Plan shall include, but not be limited to:

- Identification of any routes that would require lane closures or detours to accommodate material and equipment deliveries and methods to ensure safety.
- Avoidance of peak travel hours (8:00-10:00 a.m. and 4:00-6:00 p.m.) to the maximum extent feasible.
- Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by SVP of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles.
- Plans to coordinate in advance with property owners, if any, that may have limited access to properties.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

LESS THAN SIGNIFICANT – CONSTRUCTION. CEQA Guidelines section 15064.3(b) concerns vehicle miles travelled (VMT) as the measure of transportation impacts. As of July 1, 2020, CEQA requires use of VMT in the traffic analysis.

Construction of the proposed project would occur over approximately 30 months and project–related traffic would consist of worker commutes and the movement of materials and equipment to and from the site. Once the project is completed, the vehicle trips associated with construction would end. The total peak number of vehicle trips is estimated to be up to 30 roundtrips daily. Construction personnel would commute to the work site at the beginning of the day and leave at the end of the day, and few people would travel to and from the site throughout the middle of the day.

Vehicle miles traveled by personal vehicle trips and truck trips during construction would vary in their origins and destinations, but they are assumed to come primarily from the local Bay Area and they would be periodic and temporary. At this time, no known applicable VMT thresholds of significance for temporary construction trips that may indicate a significant impact is known. Therefore, while the proposed project would include temporary construction trips, they would be temporary and the project would not affect existing transit uses or transportation corridors and is presumed to cause a less than significant transportation impact under CEQA Guidelines section 15064.3(b).

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. Maintenance of the proposed project would require routine inspection and periodic maintenance visits by existing SVP personnel. These activities would generate a negligible number of new vehicle trips with no notable growth in VMT. The transportation impact under CEQA Guidelines section 15064.3(b) would be less than significant.

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

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED – CONSTRUCTION. Heavy equipment operating adjacent to or within a road right-of-way could increase the risk of accidents. The project involves movement of heavy equipment to and from the site but does not include work adjacent to or in roadways. Some instances of temporary lane or roadway closures may be required for delivery of oversized equipment or materials. Construction-related trucks would interact with other vehicles on the affected city streets and

potentially create hazards. Potential conflicts also could occur between construction traffic and bicyclists and pedestrians, and potential short-term hazards could be associated with temporary lane closures, if required. Construction traffic–related impacts would be reduced with implementation of mitigation measure MM T-1 (Construction Traffic Control Plan) to ensure temporary lane closures and construction activities do not result in increased traffic hazards. With the incorporation of mitigation measure MM T-1, temporary impacts during construction would be less than significant.

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. The project facilities would be similar in function to the existing substation on the site, and they would not increase transportation hazards or be an incompatible use. Maintenance of the proposed project would require routine inspection and periodic maintenance visits. Access would be via existing driveways. Therefore, the project would not cause hazards or incompatible uses due to maintenance activities proximate to public roadways; no mitigation is required.

Mitigation Measures for Transportation Hazards

MM T-1 **Construction Traffic Control Plan**. [see full text under Item (a) above]

d. Would the project result in inadequate emergency access?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Construction of the proposed project would cause a minor short-term delay in the local traffic movement in the immediate vicinity of the proposed project if there would be a temporary lane closure. During construction, the proposed project would not increase traffic substantially as compared to the existing traffic volume and the capacity of the street system in the area. If oversize equipment or materials are delivered, at least one lane of travel would remain open accommodate roadway users (including emergency vehicles). To ensure temporary lane closures do not result in inadequate emergency vehicle movements or impede access to property, mitigation measure MM T-1 (Construction Traffic Control Plan) would require review and approval of a project-specific Construction Traffic Control Plan, which would include specific measures to address temporary closures/ disruptions to travel lanes and plans to coordinate in advance with emergency service providers. With the incorporation of MM T-1, temporary impacts during construction would be less than significant.

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. Once operational, the project would have no impact on access or movement to emergency service providers. Occasional maintenance activities would be short-term in duration. Therefore, maintenance of the proposed project would have a less than significant impact on emergency vehicle access and movements.

Mitigation Measures for Emergency Access

MM T-1 **Construction Traffic Control Plan**. [see full text under Item (a) above]

5.18 Tribal Cultural Resources

TRIBAL CULTURAL RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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), or	☐	☒	☐	☐
(ii) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public 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.	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.18.1 Setting

Tribal Cultural Resources (TCRs) are defined under Assembly Bill 52 (AB 52) as resources that include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a California Native American tribe. Tribal representatives are considered experts appropriate for providing substantial evidence regarding the locations, types, and significance of TCRs within their traditional and cultural affiliated geographic areas, and therefore the identification and analysis of TCRs should involve government-to-government tribal consultation between the CEQA lead agency and interested tribal groups and/or tribal persons (Public Resources Code [PRC] §21080.3.1(a)).

Additionally, best practices show that a lead agency should make a good faith effort to identify TCRs that may be impacted by a project even if a Native American tribe does not identify any during consultation. This includes requesting a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, conducting ethnographic research, and using information that has been previously provided during tribal consultation for other projects in the area.

Records Search

As documented in Section 5.5 (Cultural Resources), the records search indicates that no prehistoric cultural resources have been previously identified in the project area.

Ethnographic Research

The project area is located within the tribal territory of the "Costanoan," a term derived from the Spanish word *Costanos*, meaning "coast people" or "coastal dwellers." At the time of European ethnic groups' arrival, the Costanoan occupied the central California coast from the northern tip of the San Francisco

Peninsula to Big Sur in the south and as far east as the Diablo Range. An estimated 1,400 or more persons of partial Costanoan descent currently reside in the greater San Francisco Bay Area. These individuals now generally prefer the term Ohlone to identify themselves (Margolin, 1978).

The Costanoan language is part of the Penutian language family spoken by other California Indian groups known as the Wintun, Maidu, Miwok, and Yokuts. The Costanoan (Ohlone) language family consists of six dialect clusters, of which three were recorded during the ethnohistoric period, including the San Francisco Bay Costanoan, Mutsun along the Pajaro River, and Rumsen near Monterey and Carmel (Golla, 2011:162-163). Linguistic analysis suggests that the Costanoans moved into the Bay Area from the San Joaquin and Sacramento River regions around 1,500 years BP and replaced the original Hokan speaking population of the Bay Area. This appears to coincide with the appearance of Late Horizon artifact assemblages. Using Spanish mission records and archaeological data, researchers have estimated a Costanoan population of 1,000 to 1,200 individuals for the Santa Clara Valley in 1770 (Levy, 1978:485; King, 1977:54).

The Costanoan practiced a hunting and collecting economy focusing on the collection of seasonal plant and animal resources, including tidal and marine resources from San Francisco Bay. They traded with neighboring groups and exported shells, salt, and cinnabar among other items. At the time of contact with Europeans, the Costanoan people were living in approximately 50 separate and politically autonomous tribelets, with each group having one or more permanent villages surrounded by a number of temporary camps used to exploit seasonally available floral and faunal resources (Levy, 1978:485, 487).

Mission Santa Clara and Mission San José were established in the South Bay in the late 1770s. The aboriginal lifeway disappeared by 1810 due diseases, a declining birth rate, and the impact of the mission system. Missionization not only decimated local populations but also relocated native peoples from throughout north-central California to the San José area. The Costanoan/Ohlone were transformed from hunters and gatherers into agricultural laborers (and in some cases, craft artisans) who lived at the missions and worked with former neighboring Native American groups such as the Esselen, Yokuts, and Miwok (Levy, 1978:486).

With secularization of the missions by Mexico in 1834, most of the aboriginal population gradually moved to ranchos to work as manual laborers (Levy, 1978:486). During the Mexican Period several ranchos were granted to Native Americans. Rancho Ulistac, located on the west bank of the Guadalupe River in the City of Santa Clara, was granted to “emancipated” Mission Indians Marcello, Pio, and Cristobal in 1845 (Hendry and Bowman, 1940:872-873). Rancho Posolmi, located along the Guadalupe River at the northeastern boundary of the City of Mountain View, was granted to Lopez Indigo (or Yndigo) in 1881 (City of San Jose, 2011).

Contemporary descendants of the Costanoan (Ohlone) Native Americans are not members of federally recognized tribes. Ohlone recognition and assertion began to move to the forefront during the early twentieth century, enforced by legal suits brought against the United States government by Indians of California (1928–1964) for reparations due them for the loss of traditional lands. The Ohlone/Costanoan Muwekma Tribe, consisting of surviving Native American lineages who trace their ancestry through Missions Dolores, Santa Clara and San José. The State of California has recognized the validity of unrecognized tribal groups of local Native Americans and has afforded both the groups and Native American individuals status in regard to consultation for planning and CEQA compliance.

Regulatory Setting

State

California Environmental Quality Act. CEQA requires that impacts to TCRs be identified and, if impacts would be significant, that mitigation measures be implemented to reduce those impacts to the extent feasible (PRC §21081). In the protection and management of the cultural environment, both the statute and the CEQA Guidelines (14 California Code of Regulations §15000 et seq.) provide definitions and standards for management of TCRs.

PRC Section 21074 defines a TCR as "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." TCRs also include "non-unique archaeological resources" that may not be scientifically significant, but still hold sacred or cultural value to a consulting tribe.

A resource shall be considered significant if it is: (1) listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in PRC Section 5020.1(k); or "(2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying these criteria, the lead agency must consider the significance of the resource to a California Native American tribe."

Therefore, a project may have substantial adverse change in the significance of a TCR if a project may cause a substantial adverse change in the significance of a tribal cultural resource (PRC §21084.2) or the resource is listed, or eligible for listing, in the CRHR or in a local register of historical resources, and it is demolished (CEQA Guidelines §15064.5(b)(2)).

The fact that a TCR is not listed in the CRHR, determined to be ineligible for listing in the CRHR, not included in a local register of historical resources, or is not identified in a historical resources survey does not preclude a lead agency from determining that the resource may be a historical resource.

CEQA Guidelines Section 15064.5(b)(1) explains that effects on historical resources (or TCRs, if so determined by the lead agency) would be considered adverse if it involves physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. Adverse effects on historical resources may result in a project having a significant effect on the environment. CEQA Guidelines Section 15064.5(c)(3) requires that TCRs receive treatment under PRC Section 21083.2, which requires that these resources be preserved in place or left in an undisturbed state. If these treatments are not possible, then mitigation for significant effects is required, as outlined in PRC Section 21082.2(c).

AB 52 Tribal Consultation

The proposed project's effects on potentially buried and therefore presently unidentified TCRs was evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines and with consideration to AB 52 and the Governor's Office of Planning and Research's, "Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA" (OPR, 2017)

Representatives of the Tamien Nation had previously requested to be contacted regarding projects within the City of Santa Clara. Two representatives of the Tamien Nation requesting to be contacted under AB 52 for possible tribal consultation were notified of the Homestead Rebuild project and invited to engage in consultation. The invitation was extended to each representative by email with a letter attached (May

23, 2022) and by a copy of the letter sent by registered mail (May 24, 2022). No responses were received to the emails or letters during the 30-day response period. This concluded AB 52 compliance under CEQA.

Sacred Lands File Search

The City requested a search of the NAHC's Sacred Lands file to determine the presence or likelihood of encountering TCRs within the project area. On January 27, 2022, the NAHC responded that the search was completed with negative results (i.e., no sacred sites are located within the project area).

5.18.2 Environmental Impacts and Mitigation Measures

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 WITH MITIGATION INCORPORATED. There are no TCRs that are listed in, or are known to be eligible for listing in, the CRHR or local register of historical resources within the proposed project site or within 1/8 mile of the project site. Although there is no evidence that TCRs exist within the proposed project site or immediate vicinity, it is possible that previously unidentified TCRs that may be eligible for inclusion in the NRHP, CRHR, or local registers could be discovered and damaged, or destroyed, during project-related ground disturbance, which would constitute a significant impact absent mitigation. Implementation of mitigation measure MM TCR-1 would evaluate and protect unanticipated TCR discoveries, thereby reducing this impact to a less than significant level after mitigation.

Mitigation Measure for Unanticipated Tribal Cultural Resources

MM TCR-1 **Management of Unanticipated Tribal Cultural Resources.** During project-level construction, should subsurface tribal cultural resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist and an authorized tribal representative shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5 and Section 21074. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to tribal cultural resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in the tribal cultural resource.

(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 INCORPORATED. No known TCRs were identified during a search of the NAHC's Sacred Lands File, or during ethnographic research. Nevertheless, it is possible that previously unidentified TCRs that may qualify as a significant resource according to lead agency determination could be discovered and damaged or destroyed during ground disturbance. Such a discovery or inadvertent damage/destruction to a previously unknown TCR would constitute a significant impact absent mitigation. Implementation of mitigation measure MM TCR-1, which is discussed under Item (a), would evaluate and protect unanticipated TCR discoveries, thereby reducing this impact to a less than significant level.

Mitigation Measure for Unanticipated Tribal Cultural Resources

MM TCR-1 **Management of Unanticipated Tribal Cultural** Resources [see full text under Item (a) above]

5.19 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

5.19.1 Setting

Utility and services system facilities associated with electricity, domestic (potable) water, stormwater, solid waste, communications, and natural gas are provided and maintained by a variety of local purveyors, including cities, counties, special districts, water agencies, and private companies. Table 5.17-1 lists utility providers in the city.

Table 5.19-1. Utility Providers

- **Natural gas** – Pacific Gas & Electric Company
- **Electricity** – Silicon Valley Power
- **Water** – City of San Francisco's Hetch Hetchy aqueduct, Santa Clara Valley Water District, Santa Clara City-owned wells
- **Wastewater** – San José-Santa Clara Water Pollution Control Plant
- **Telephone** – AT&T, Xfinity (Comcast)
- **Solid Waste** – Mission Trail Waste Systems, Allied Waste, Green Waste Recovery, and Los Gatos Garbage Company

Sources: City of Santa Clara, 2014; Allconnect, 2022

Utilities

Water Supply

Potable water for the City of Santa Clara comes from a combination of sources: the City of San Francisco's Hetch Hetchy aqueduct system, the Santa Clara Valley Water District, and groundwater from City-owned wells. Groundwater comprises almost 70 percent of the City's water supply. Recycled wastewater is also

used in the City for certain landscape irrigation, industrial, and construction purposes (City of Santa Clara, 2014).

Electricity and Natural Gas

Silicon Valley Power (SVP) is owned and operated by the City of Santa Clara as a municipal electric utility and as a department of the City. SVP maintains over 375 miles of underground distribution lines, nearly 200 miles of overhead distribution lines and over 50 miles of transmission lines. Electricity for the City is provided from natural gas, wind, solar, geothermal, and hydroelectric generation resources in California and other western states (City of Santa Clara, 2020).

The City's natural gas is provided by Pacific Gas & Electric Company. Transmission mains deliver gas from basins in California, Canada, and the Western United States (City of Santa Clara, 2014).

Service System

Sewage/Wastewater

Sewer systems collect wastewater in the City Santa Clara and transport it via pipelines to the San Jose–Santa Clara Regional Wastewater Facility (RWF) in San Jose, CA. The RWF treats approximately 110 million gallons per day (mgd) of wastewater from cities in Santa Clara County and is able to treat up to 167 mgd. (City of San Jose, 2021).

About 10 percent of the total treated wastewater from the RWF is directed into the South Bay Water Recycling system. The treated wastewater is used for landscaping irrigation, dual plumbing, industrial uses, and other approved uses around the southern Bay Area. Recycled water distribution pipelines are located throughout the City of Santa Clara. Treated wastewater that is not directed into the recycled water pipelines is discharged into San Francisco Bay (City of Santa Clara, 2014).

Solid Waste Disposal

Solid waste and recycling collection services in the City of Santa Clara is primarily provided by 4 companies: Mission Trail Waste Systems, Allied Waste, Green Waste Recovery, and Los Gatos Garbage Company. Newby Island Sanitary Landfill is the main landfill that serves the City, though solid wastes are also sent to landfills outside of Santa Clara County (City of Santa Clara, 2014). Newby Island Sanitary Landfill is located at 1601 Dixon Landing Road, Milpitas, CA 95035. Table 5.19-2 lists the capacities of the landfills used.

Table 5.19-2. Landfill Capacities

Landfill Name	Total Capacity (cu.yd.)	Remaining Capacity (cu.yd.)	Remaining Capacity (percent)	Maximum Throughput (tons/day)
Newby Island Sanitary Landfill (Cease operation estimated 2041)	57,500,000	21,200,000	36.9	4,000
Guadalupe Sanitary Landfill (Cease operation estimated 2048)	28,600,000	11,055,000	38.7	1,300
Corinda Los Trancos Landfill (Cease operation estimated 2034)	60,500,000	22,180,000	36.7	3,598

Sources: CalRecycle, 2021a; CalRecycle, 2021b; CalRecycle, 2021c

Regulatory Background

This section includes a description of the utilities and public service systems regulatory framework.

Federal

Clean Water Act Section 402: National Pollutant Discharge Elimination System. Section 202 of the Clean Water Act (CWA) establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point source discharges of pollutants of Waters of the United States. Discharges or construction activities that disturb one or more acres, which includes the proposed project, are regulated under the NPDES stormwater program and are required to obtain coverage permit under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements such as the implementation of the Stormwater Pollution Prevention Plan, which would further specify best management practices to avoid or eliminate pollution discharge into the nation's waters. The State Water Resources Control Board (SWRCB) issues both general and individual permits under this program. The SWRCB delegates much of its NPDES authority to nine regional water quality control boards. The proposed project's NPDES permits would be under jurisdiction of Region 2, the San Francisco Regional Water Quality Control Board.

State

California Government Code – Protection of Underground Infrastructure. The responsibilities of California utility operators working in the vicinity of utilities are detailed in Section 1, Chapter 3.1, "Protection of Underground Infrastructure" (Article 2 of California Government Code §§4216-4216.9). This law requires that an excavator must contact a regional notification center at least two days prior to excavation of any subsurface installation. Any utility provider seeking to begin a project that may damage underground infrastructure can call Underground Service Alert, the regional notification center. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area. The code also requires excavators to probe and expose underground facilities by hand prior to using power equipment.

California Integrated Waste Management Act of 1989. Assembly Bill 939 codified the California Integrated Waste Management Act of 1989 in the Public Resources Code and established a hierarchy to help the California Integrated Waste Management Board (CIWMB) and local agencies implement three major priorities under the Integrated Waste Management Act: source reductions; recycling and composting; and environmentally safe transformation and land disposal. Waste diversion mandates are included under these priorities. The duties and responsibilities of the CIWMB have since been transferred to the California Department of Resources Recycling and Recovery (CalRecycle) after the abolishment of the CIWMB in 2010, but all other aspects of the Act remain unchanged.

The Act requires all local and county governments to adopt a waste reduction measure designed to manage and reduce the amount of solid waste sent to landfills. This Act established reduction goals of 25 percent by the year 1995 and 50 percent by the year 2000. Senate Bill 1016 (2007) streamlines the process of goal measurement related to Assembly Bill 939 by using a disposal-based indicator: the per capita disposal rate. The per capita disposal rate uses only two factors: the jurisdiction's population (employment can be considered in place of population in certain circumstances) and the jurisdiction's disposal as reported by disposal facilities. CalRecycle encourages reduction measures through the continued implementation of reduction measures, legislation, infrastructure, and support of local requirements for new developments to include areas for waste disposal and recycling on-site.

California Code of Regulations (Title 27). Title 27 (Environmental Protection) of the California Code of Regulations defines regulations and minimum standards for the treatment, storage, processing, and disposal of solid waste at disposal sites. The State Water Resources Control Board maintains and regulates compliance with Title 27 (Environmental Protection) of the California Code of Regulations by establishing waste and site classifications and waste management requirements for solid waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment units. The compliance of the proposed project would be enforced by the San Francisco RWQCB Region 2 and the California Department of Resources Recycling and Recovery (CalRecycle) (formerly the California Integrated Waste Management Board). Compost facilities are regulated under CCR Title 14, Division 7, Chapter 3.1 Section 17850 through 17895, by CalRecycle. Permit requests, Reports of Waste Discharge, and Reports and Disposal Site Information are submitted to the RWQCB and CalRecycle, and are used by the two agencies to review, permit, and monitor these facilities.

Local

Energy Policies. The purpose of the City's energy policies is to encourage reduced energy use. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.3-P10.** Maintain the City's level of service for high quality utilities and telecommunications infrastructure.
- **Policy 5.10.3-P12.** Work with Silicon Valley Power to implement adequate energy distribution facilities to meet the demand generated by new development.

Water Policies. The purpose of the City's water policies is off-set increased demand associated with the implementation of the City General Plan. The following policies in the General Plan generally relate to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.4-P1.** Promote water conservation through development standards, building requirements, landscape design guidelines, education, compliance with the State Water Conservation Landscaping Ordinance, incentives, and other applicable City-wide policies and programs**.**
- **Policy 5.10.4-P4.** Require an adequate water supply and water quality for all new development.
- **Policy 5.10.4-P5.** Prohibit new development that would reduce water quality below acceptable State and local standards.
- **Policy 5.10.4-P10.** Work with Santa Clara Valley Water District to minimize undesirable compaction of aquifers and subsidence of soils.

Conservation. The City's conservation policies consider the regulation of wastewater to protect biological resources in the City. The following policy in the General Plan generally relates to the proposed project (City of Santa Clara, 2014):

- **Policy 5.10.1-P6.** Require adequate wastewater treatment and sewer conveyance capacity for all new development.

Land Use. The City's land use policies consider the effects of development to public facilities and infrastructure. The following policy in the General Plan generally relates to the proposed project (City of Santa Clara, 2014):

- **Policy 5.3.1-P17** Promote economic vitality by maintaining the City's level of service for public facilities and infrastructure, including affordable utilities and high quality telecommunications.

5.19.2 Environmental Impacts and Mitigation Measures

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

LESS THAN SIGNIFICANT. The proposed project would involve construction of a new substation and removal of an existing substation. Construction activities would generate a minimal demand for water or wastewater treatment and no demand for natural gas facilities. The project would not require the relocation, expansion, or development of new utility systems beyond the project itself. During routine operation and maintenance of the proposed project, SVP's Homestead Substation would be unmanned and would not create any need for new or expanded utilities or service systems.

Water, Wastewater Treatment or Storm Water Facilities. The proposed project would generate minimal demand for water or wastewater treatment. A water truck may be on-site to support dust suppression during ground disturbing work. Any water used for dust control would be dispersed onsite and would either evaporate or be absorbed into the ground; therefore, no wastewater generation is anticipated from this use. Concrete would be required for foundations and pole installation. Excess concrete from construction as well as removed concrete foundations would be disposed of at an approved site away from the work area. Dewatering may be necessary if groundwater is encountered. Portable toilets would be provided for construction work crews and would be removed after construction is completed and these toilets will be maintained by a licensed sanitation contractor.

The proposed project would not result in any increased stormwater flow entering stormwater drainage systems and therefore would not require, or result in the construction of, new stormwater drainage facilities or the expansion of existing facilities.

Upon completion of construction, the proposed project would not generate any demand for water or wastewater treatment. There would be no sanitary sewer hookup at the site. Existing wastewater and water treatment facilities are adequate to accommodate the demand generated by the proposed project. Thus, the project would have less than significant impact that would not cause the need for the construction or expansion of water or wastewater treatment facilities or storm water drainage.

Electric Power, Natural Gas, or Telecommunications Facilities. No new natural gas or telecommunications facilities would be required in support of the project. The existing electric power system, including the existing substation, would remain in service during construction and commissioning of Phase 1 of the project. During Phase 2, the existing antiquated Homestead Substation would be removed and additional new substation facilities installed in that portion of the site occupied by the old substation. These activities would not cause significant environmental effects.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

LESS THAN SIGNIFICANT. Limited amounts of water would be used for dust control and to make concrete for foundations. This would be a short-term need associated with construction and would end with the completion of construction.

Water may also be used for dust suppression during construction. The volume of water required for dust control is not known. However, the amount of water for dust suppression during construction is considered to be nominal in comparison to available municipal water supply.

Water trucks would provide water for dust control as needed. Also, a hose bib is located on the site and may be used as needed for dust suppression or other water-related needs. Upon completion, the proposed project would not generate any demand for water. Therefore, the proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

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

LESS THAN SIGNIFICANT. The proposed project would generate minimal wastewater during construction. The proposed project would provide portable toilets for construction workers and the waste would be disposed of through a treatment facility with adequate capacity. As discussed in Item (a) above, existing wastewater facilities would adequately accommodate the minor demand caused by project construction while serving existing commitments. Therefore, this impact would be less than significant.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

LESS THAN SIGNIFICANT. Construction debris and waste generated during construction of the project would be transported to staging areas or to an SVP Service Center for recycling or disposal. Three wood poles would be removed and replaced. The removed wood poles would be hauled to a service center to be reused or transported with other materials for disposal at a licensed Class I or Class II landfill or a composite lined portion of a solid waste landfill. Total solid waste generated by construction of the proposed project is anticipated to be minor compared to the capacity of local recycling infrastructure and existing landfills, as identified in Table 5.19-2, Landfill Capacities. The landfills identified in Table 5.19-2 are not expected to close for about another 20 years. During operation, the proposed project would be unmanned and would not generate notable quantities of solid waste. Therefore, the impact of solid waste disposal on local infrastructure and landfill capacity would be less than significant.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

NO IMPACT. The California Integrated Waste Management Act of 1989, which emphasizes resource conservation through the reduction, recycling, and reuse of solid waste guide solid waste management requires that localities conduct a Solid Waste Generation Study (SWGS) and develop a Source Reduction Recycling Element (SRRE). The proposed project would operate in accordance with these applicable Solid Waste Management Policy Plans by recycling materials where feasible. As identified in Table 5.19-2, Landfill Capacities, the landfills serving the site would have sufficient capacity to accommodate project construction solid waste disposal needs, and project solid waste disposal would not result in the need for new or expanded landfill facilities. Therefore, the proposed project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste disposal limits and landfill capacities. No impact would occur.

5.20 Wildfire

WILDFIRE If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, **would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

5.20.1 Setting

Wildland fire protection in California is the responsibility of either the State, local, or federal government, depending on the location. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, which are referred to as Fire Hazard Severity Zones (FHSZ), influence how people construct buildings and protect property to reduce risk associated with wildland fires. FHSZ maps identify the likelihood that an area will burn over a 30 to 50-year period without considering that modifications may occur, such as fuel reduction efforts. Risk is not indicated by the maps. Risk is the potential damage that can be done by a fire, based on existing conditions. Risk can be reduced by various strategies, such as creation of defensible space, fuel load reduction, and, in the case of structures, the use of sprinklers and ignition-resistant building materials and construction. The City of Santa Clara area is not located in a FHSZ in the CAL FIRE wildland fire hazard maps, primarily due to its urban conditions, flat terrain, and low fuel load. Fire protection within the City is discussed in Section 5.15 (Public Services).

Regulatory Background

Federal

A variety of line and tower clearance standards are used throughout the electric transmission industry. These address distances between energized lines and support structures and potential obstructions, including vegetation, structures, and the ground. Nationally, most transmission line owners follow the National Electric Safety Code (NESC) rules or American National Standards Institute (ANSI) guidelines, or both, when managing vegetation around transmission system equipment. The NESC deals with electric safety rules, including transmission wire clearance standards, whereas the applicable ANSI code deals with the practice of pruning and removal of vegetation.

State and Local

SVP operates and maintains the distribution and transmission grid inside the City of Santa Clara, yet the larger transmission grid that brings most of SVP's energy into the City is integrated throughout the State. Therefore, if large transmission lines are de-energized or constrained, SVP may need to reduce load quickly to help the greater transmission grid. Depending on the severity of the event, it may mean power shutoffs or rolling outages in the City of Santa Clara.

California Public Utilities Commission (CPUC) General Order (GO) 95. CPUC's GO 95 is the key standard governing the design, construction, operation, and maintenance of overhead electric lines in the State. The CPUC has promulgated various Rules to implement the fire safety requirements of General Order 95, including:

- *GO 95 Rule 31.2* requires that lines be inspected frequently and thoroughly to ensure that they are in good condition, and that lines temporarily out of service be inspected and maintained in such condition so as not to create a hazard.
- *GO 95 Rule 35* governs requirements that vegetation management activities be performed in order to establish necessary and reasonable clearances.
- *GO 95 Rule 38* establishes minimum vertical, horizontal, and radial clearances of wires from other wires.

California Public Resources Code Sections 4294 and 4293. The California Public Resources Code (CPRC) Sections 4292 and 4293 specify requirements related to fire protection and prevention in transmission line corridors. CPRC Section 4292 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line has primary responsibility for fire protection of such areas, and shall maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower (CPRC 4292).

Power Line Fire Prevention Field Guide 2020 Edition. CAL FIRE, the state's three investor-owned utilities (Pacific Gas and Electric [PG&E] Company, Southern California Edison Company, and San Diego Gas and Electric), and other California electric utilities have mutually developed a comprehensive field guide for their personnel. Its purpose is "to provide information and guidance to the personnel of the fire service agencies and electrical operators for minimum uniform application within the areas of their respective jurisdiction and franchise responsibilities." In addition to safety of the public, the guide details fire hazard reduction maintenance procedures for the safety of conductors and certain hardware.

PG&E's Public Safety Power Shutoff Program. The Public Safety Power Shutoff program was developed in cooperation with state utility regulators at the CPUC. A utility shuts off electricity on transmission and distribution lines in fire-prone areas during high fire-risk periods, including:

- Red flag warning declared by the National Weather Service;
- Low humidity levels – generally 20% and below; and/or
- Forecasted sustained winds generally above 25 mph and wind gusts in excess of approximately 45 mph.

5.20.2 Environmental Impacts and Mitigation Measures

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT WITH MITIGATION – CONSTRUCTION. The project is not adjacent to any road. It is not near any roads in a very high FHSZ nor is it on evacuation routes. Temporary short-term lane closures of roadway

lanes may be required during the 30-month construction period to accommodate delivery of oversized equipment such as transformers and other large equipment or materials. However, at least one lane of travel would remain open at all times and any closure or disruption would be a limited duration. SVP would implement traffic control protocols and a project-specific traffic plan under mitigation measure MM T-1 (Construction Traffic Control Plan). With incorporation of mitigation, impacts from project construction would not substantially impact emergency response or evacuation plans.

NO IMPACT – OPERATION AND MAINTENANCE. Once operational, the proposed project would have no impact on emergency response or evacuation. Occasional maintenance activities would be short-term in duration and would occur within the property, which is not on a roadway. Therefore, maintenance of the proposed project would not substantially impair an emergency response plan or emergency evacuation plan.

Mitigation Measures for Emergency Response

MM T-1 Construction Traffic Control Plan. [see full text in Section 5.17, Transportation/Traffic]

b. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

LESS THAN SIGNIFICANT – CONSTRUCTION. The project would not create any occupied facilities. However, there are residences in the vicinity: north of Saratoga Creek, east across Kiely Boulevard, and south and west, adjacent to the project site. The closest residential complex is located within 100 feet of the project site.

At project completion, the site would be devoid of vegetation, paved, and surrounded by a concrete block wall. These conditions reduce fire risk to nearby properties. Construction activities have the potential to be a fire ignition source. For example, sparks from welding or from metal striking metal or stone could ignite flammable materials such as packing cardboard or rags. To reduce the fire risk, SVP would implement its standard fire prevention protocols. The limited amount of flammable material on site during construction and the barren nature of the site mitigate against the spread of any accidental fire. Furthermore, the City of Santa Clara area is not located in a FHSZ in the CAL FIRE wildland fire hazard map (CAL FIRE, 2022). Impacts from wildfire risk during construction would be less than significant and no mitigation is required.

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. Electrical lines can start a fire if an object such as a tree limb, kite, or mylar balloon simultaneously contacts the power line conductors and a second object, such as the ground or a portion of the supporting pole. System component failures and accidents during maintenance activities can also cause faults that result in arcing. Power lines are also subject to conductor-to-conductor contact, which can occur when extremely high winds force two conductors to oscillate so excessively that they contact one another. This contact can result in arcing (sparks) that could ignite any nearby vegetation. Aging, failing equipment increases the risk of system failures and faults.

The project would update and install new electrical equipment, reducing the risk of a system failure or line fault due to aging equipment. Operation and maintenance activities would be incorporated into SVP's existing O&M schedule for substations and associated facilities. As with current operation and maintenance, SVP would comply with all current federal and State laws related to vegetation clearance and fire prevention, so as to not exacerbate wildfire risks. Impacts from wildfire risk during operation and maintenance would be less than significant and no mitigation is required.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

LESS THAN SIGNIFICANT. The proposed project includes installation of new substation equipment, removal of existing equipment, and a reconfiguration of the existing transmission line serving the substation, moving it from wood poles on the south and west sides of the site to new steel poles on the north side of the site. The activities associated with the proposed project would occur within the project boundaries in an urban setting and would rely on existing paved roads for access. No fuel breaks or emergency water sources would be required. The reconfigured transmission line would not be within any wildfire risk area.

Operation and maintenance activities would be incorporated into the existing O&M schedule for the SVP facilities. As with current operation and maintenance, SVP would comply with all current federal and State laws related to vegetation clearance and fire prevention. No additional fire risk impacts would occur because of operating and maintaining the project.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

LESS THAN SIGNIFICANT. The proposed project is located in an urban area with flat topography and low fuel load. As with current operation and maintenance, SVP would comply with all current regulations related to vegetation clearance and fire prevention. Given the fire risk is low and the site is flat with no known historic landslides or slope instability and the limited amount of surface disturbance proposed, the exposure of people or structures to risks as a result of runoff, post fire instability, or drainage changes would be less than significant.

5.21 Corona and Induced Current Effects

5.21.1 Environmental Setting

Corona

Corona is one of the phenomena associated with all energized electrical devices, including high voltage transmission lines. The localized electric field near a conductor can be sufficiently concentrated to ionize air close to the conductors. This can result in a partial discharge of electrical energy called a corona discharge, or corona. The corona effect is the physical manifestation of discharged electrical energy into very small amounts of sound, radio noise, heat, and chemical reactions with air components. It is a phenomenon associated with all energized electrical devices but is especially common with high-voltage power lines.

The amount of corona produced by a power line is a function of several factors, including line voltage, conductor diameter, conductor locations in relation to each other, condition of conductors and hardware, and local weather conditions including power line elevation above sea level. Corona typically becomes a design concern for 230 kV and higher power lines that are overhead (i.e., transmission lines on poles or towers). It is less noticeable for lines that are operated at lower voltages (i.e., subtransmission and distribution-sized lines). The line feeding the Homestead Substation is 60 kV and the distribution lines leaving the station underground are 12 kV. The electric field gradient is greatest at the conductor surface. Larger-diameter conductors have lower electric field gradients at the conductor surface and, therefore, lower corona noise than smaller-diameter conductors. The corona effect would not be a design concern for underground portions of power lines, regardless of voltage level, because the energized conductors are fully enclosed in a semi-conducting layer within insulated cables that serve to equalize the electrical gradient at the surface of the components.

Induced Currents

Electric currents can be induced in metallic objects located within the electric fields created by power lines. An electric current can flow when an object has an induced charge and a path to ground is present. The amount of induced current that can flow is important to evaluate from a safety perspective because of the potential for electrical shocks to people and the possibility of electric arcs that could form across small gaps between conductive surfaces. These arcs can have the secondary effect of igniting flammable materials that may be in the vicinity of the arc. In addition, induced currents are evaluated for their potential to lead to corrosion of metallic objects (such as buried pipelines) from the discharge of the induced current to ground.

From a safety perspective, the National Electrical Safety Code (NESC) specifies that transmission lines be designed to limit short circuit current from vehicles or large objects near the line to no more than 5 milliampere (mA). The NESC also addresses shock hazards to the public by providing guidelines on minimum clearances to be maintained for practical safeguarding of persons during the installation, operation, or maintenance of overhead transmission lines and their associated equipment.

5.21.2 Environmental Impacts and Assessment

Common concerns are with regard to electrical interference with existing and future development in the area. The CEQA Guidelines do not provide significance criteria for evaluating impacts from corona or induced current effects. Corona and induced current from high voltage power lines can cause environmental impacts through:

- Audible noise
- Radio and television interference
- Computer interference
- Disturbance of cardiac pacemakers
- Ignition of flammable materials
- Corrosion of buried metallic objects

The proposed project involves replacing the existing substation, by removing two existing transformers and installing three new transformers and associated facilities, and the project would reconfigure the existing 60 kV line within the substation property. The project would not change the operating voltages of the existing substation, and circuits operating at 60 kV typically cause noise at levels comparable to the ambient baseline noise levels. The noise environment in the project area is described in Section 5.13 (Noise). At levels comparable to the ambient baseline, the impact of audible noise from the corona effect would be less than significant.

Although corona can generate high frequency energy that may interfere with broadcast signals or electronic equipment, this is generally not a problem for transmission or lower voltage power lines below 115 kV. Electric fields from power lines do not typically pose interference problems for electronic equipment in businesses or homes since the equipment is shielded by buildings and walls. The Institute of Electrical and Electronic Engineers (IEEE) has published a design guide (IEEE, 1971) that is used to limit conductor surface gradients so as to avoid corona levels that would cause electronic interference. Corona or gap discharges related to high frequency radio and television interference impacts are dependent upon several factors, including the strength of broadcast signals, and are anticipated to be very localized if they occur. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines. Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding or changes at the monitor location. As a result, impacts from corona, radio/television interference, and magnetic field interference would be less than significant.

Induced currents and voltages on conducting objects near the proposed power lines would not pose a threat in the environment if the conducting objects are properly grounded. Project construction and operation would be done in accordance with SVP's existing inspection and maintenance program and safety practices. Likewise, induced currents would not increase the risk of fuel ignition in the area.

The electric fields associated with high voltage transmission lines may be of sufficient magnitude to impact operation of a few older model pacemakers resulting in them reverting to an asynchronous pacing (IEEE, 1979). Substantial adverse effects would not occur with prolonged asynchronous pacing; periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Therefore, while a transmission line's electric field may impact operation of some older model pacemakers, the result of the interference would be of short duration and is not considered significant or harmful. No mitigation measures would be required or recommended.

5.22 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? (*Cumulatively considerable* means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

a. Does the project have the potential to substantially 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, substantially 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 INCORPORATED. The proposed project would be located in the southwest area of the City of Santa Clara. This project site is in a highly urbanized area. Vegetation at the site is sparce and the few fence-line trees would be removed. North of the site is Saratoga Creek and an adjacent park are with landscaping, including trees, shrubs, and grass. As described in Section 5.4, Biological Resources, there are no special-status plants or animals in the project area due to the lack of habitat in such a highly urbanized industrial environment. The project is not expected to result in impacts to habitats that support sensitive species. However, some special-status birds may use the project vicinity for foraging, although the habitat is marginal and the potential for occurrence of these species is very low. Implementation of mitigation measures MM BIO-1 through MM BIO-3 would reduce these potential impacts to less than significant levels.

Similarly, Section 5.5 (Cultural Resources) and Section 5.18 (Tribal Cultural Resources) show that the project would have a less than significant impact to important examples of the major periods of California history or prehistory. The records search indicates that no prehistoric cultural resources have been previously identified in the project area. However, as described in Section 5.5 (Cultural Resources) and Section 5.18 (Tribal Cultural Resources), the proposed project could have an adverse effect on previously undiscovered cultural or tribal cultural resources. With implementation of mitigation measures MM CR-1, MM CR-2, and MM TCR-1 for unanticipated discoveries of archaeological and historical resources or human remains and mitigation measure MM G-1 for paleontological resources, impacts would be less than significant and the project would not eliminate important examples of major periods of California history or prehistory.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. CEQA defines a cumulative impact as an effect that is created as a result of the combination of the proposed project together with other projects (past, present, or future) causing related impacts. Cumulative impacts of a project need to be evaluated when the project's incremental effect is cumulatively considerable and, therefore, potentially significant.

Two planned projects were identified within 0.25 miles of the Homestead site. The projects were reviewed to identify whether the Homestead Substation project could contribute to cumulatively significant impacts when evaluated in combination with these projects. The two projects identified from the Planning Department's current project list. These are considered potential cumulative projects whose impacts could combine with those of the Homestead Substation project. They are:

2891 Homestead Road - Rezoning to allow construction of 8 townhouses. There is no anticipated construction date as the application has been inactive.

3131 Homestead Road - Laguna Clara Apartment rehabilitation and expansion to allow approximately 183 net new apartments. Anticipated construction 2022+.

As discussed in preceding Sections 5.1 through 5.21 any potential impacts of the proposed project would occur during construction, with few, if any, operational effects. Because the construction-related impacts of the project would be temporary and localized, they would have the potential to combine with similar impacts of other projects only if they occur at the same time and in close proximity. The cumulative temporary and localized impacts of the construction of the substation project are considered by issue area below. While actual construction periods often vary from those initially anticipated, it does not appear that the two identified projects would overlap with the anticipated 2025 beginning of construction at the Homestead Substation site. However, applications for other unknown projects may occur and may overlap with the Homestead Substation construction period. Because the area is built out, any projects would be reconstruction or construction of replacement land uses on already occupied site. Given the built out nature of the project vicinity and the capacity of existing thoroughfares, there would be no long-term impacts from the proposed project that would have the potential to combine with impacts from the projects listed.

Aesthetics. As described in Section 5.1, views to and from the project site are limited by existing buildings and vegetation. The viewshed of the proposed project is an urban setting and continued urbanization is the likely trend for the foreseeable future with little change in its overall visual character. The impacts from the construction of the substation project would be minimal because the work would be temporary in nature. The proposed project represents only a relatively minor incremental change in cumulative conditions given the urban nature of the location. Therefore, the Project's visual effects are less than significant and are not considerable enough to represent a significant cumulative impact.

Agriculture and Forestry Resources. There is no agricultural activity at the site or any of the cumulative project sites. The Project would not contribute to cumulative impacts to agriculture and forestry resources.

Air Quality. Air emissions would occur during construction of the new substation. Emissions would include criteria air pollutants that could contribute to existing or projected violations of the ambient air quality standards for ozone and PM10. Other pollutants resulting from construction activities are accounted for in emissions inventories for regional air quality maintenance plans and would not impede attainment or

maintenance of ozone or carbon monoxide (CO) standards. Foundation excavation and other construction-related activities could potentially expose sensitive receptors to construction-related emissions, including emissions of fugitive dust, DPM, and other toxic air contaminants, which would expose the receptors to increased health risk and hazards. These would occur only during construction and would be less than significant with implementation of mitigation measure MM AQ-1 (Implement Basic Construction Air Quality Mitigation). Any potential adverse cumulative air quality impacts would be short-term (lasting for the duration of construction) and would not be cumulatively considerable; therefore, the cumulative impact would be less than significant. The operation and maintenance emissions (e.g., limited vehicle use) would be less than the emissions during construction activities and also less than the significance thresholds.

Concurrent construction of other projects in close proximity to the proposed project would result in increased local air quality impacts for the duration of simultaneous construction activities. However, simultaneous construction projects would also need to comply with BAAQMD rules and regulations regarding criteria pollutants. Any potential adverse cumulative air quality impacts would be short-term (lasting for the duration of construction) and would not be cumulatively considerable; therefore, the cumulative impact would be less than significant.

Biological Resources. The proposed project and the cumulative projects are located within an urbanized area and near busy roadways. Due to the highly disturbed landscape, no habitat for special-status plant or wildlife species remains on the proposed project site. Therefore, construction and operation and maintenance of the proposed project would have no impacts to special-status plants or their habitat. The disturbed habitat conditions in the northeast area of the City of Santa Clara have limited wildlife habitat value. There is the potential for birds to nest in nearby trees during nesting season. Mitigation measures MM BIO-1 (Biological Monitoring), MM BIO-2 (Worker Environmental Awareness Training), and MM BIO-3 (Preconstruction Nesting Bird Surveys and Nest Protection) would ensure the impacts to nesting birds are less than significant. Some special-status birds may use the vicinity of project site for foraging, but the habitat is marginal and the potential for occurrence of these species is very low. Trees that are proposed to be removed as part of the project would be replaced at the discretion of the City Arborist. The project would not represent a significant contribution to cumulative impacts. Given the built-up nature of the City, other cumulative projects in the vicinity have limited biological resources. Impacts to biological resources during operation and maintenance of the substation would be the same as those during current operation and maintenance practices; therefore, no contribution to cumulative impacts would occur.

Cultural Resources. There are no known historical or unique archaeological resources identified within the proposed project area; however, previously unknown buried historical resources or human remains could be discovered and damaged, or destroyed, during ground disturbing work. Short-term construction activities and operation and maintenance activities would not significantly affect any unknown cultural or paleontological resources or human remains with the implementation of mitigation measures MM CR-1 (Worker Training and Management of Unanticipated Discoveries of Historical Resources, Unique Archaeological Resources) and MM CR-3 (Treatment of Human Remains), as discussed in Section 5.5, Cultural Resources. No cultural resources would be affected during project construction or during operation of the project, and no contribution to cumulative impacts would occur.

Energy. An objective of the proposed project is to respond to the growth of electrical load of SVP's customers. The proposed project would achieve this objective by facilitating an increase in the capacity of SVP's transmission system to transfer electrical power to its customers. Energy (electricity, diesel fuel, and gasoline) would be used during construction. Equipment used would comply with mandated efficiency standards and there would be no wasteful, inefficient, or unnecessary consumption of energy resources. Operation and maintenance activities associated with the substation would be similar in nature to existing

O&M activities. By increasing the capacity of the substation, the project would serve existing and future demand from California's end users. The proposed project would not conflict with any state or local plan for prioritizing renewable energy or energy efficiency. This impact would be less than significant, there would be no considerable contribution to a cumulative impact associated with energy.

Geology and Soils. As discussed in Section 5.7, the proposed project would be located in an area mapped as likely to experience strong ground shaking, including ground shaking that could result in liquefaction-related phenomena and erosion. Projects in the vicinity of the Homestead Substation would also be located in areas mapped as likely to experience strong ground shaking potentially combining to expose people or structures to potential significant cumulative impacts. All construction would be required to comply with building code standards that take into account effects of seismic events. For the proposed project, implementation of mitigation measure MM G-1 (Conduct Geotechnical Investigations for Liquefaction), which would ensure that project design would reduce the potential for liquefaction to affect the project. Similarly, mitigation measure MM G-2 (Conduct Geotechnical Investigations for Expansive Soils) would address any risk associated with expansive soils. The project would not increase potential risks associated with seismic events or other geologic hazards. Short-term construction impacts to soils, including unstable soils, have the potential to occur; however, final geotechnical recommendations would reduce the impacts to a less than significant level and the proposed project impacts are not considerable enough to represent a significant cumulative impact. Adherence to similar design and engineering standards, which are applicable to the identified cumulative projects, ensure that their cumulative impacts to geology and soils would also be less than significant.

There is a limited potential for paleontological resources to occur on the site. Mitigation measure MM G-3 (Work Training and Management of Unanticipated Discoveries of Paleontological Resources) would ensure any potential impacts are less than significant and would not contribute to a cumulatively considerable impact.

Greenhouse Gas Emissions. Greenhouse gas (GHG) emissions would result from the burning of fuels required to operate construction equipment and vehicle use during construction activities. Primary GHG emissions during construction are associated with CO_2 from the combustion of gasoline and diesel fuel in equipment and vehicles. CH_4 and N_2O are also emitted from fuel combustion but at rates of less than 1 percent of the mass of CO_2 combustion emissions. Construction-related emissions would be distributed over 30 months. These estimated levels would not exceed the threshold level of 25,000 metric tons per year for annual mandatory reporting of GHGs. Any potential adverse GHG impacts would be short-term and not cumulatively considerable; therefore, GHG emissions during construction would have a less than significant cumulative impact.

GHG emissions from operation and maintenance would be minimal, as the substation would require only infrequent maintenance. The small amount of emissions created during construction and operation and maintenance would result in a relatively minor incremental change in cumulative conditions and would not significantly contribute to cumulative impacts.

Hazards and Hazardous Materials. The use of hazardous materials for the project would be minimal during construction and operation. Hazardous materials would be stored and used in compliance with applicable regulations. The project would not result in an increase in usage of hazardous materials. Impacts from routine use, transportation, disposal, and accidental spillage of hazardous materials would be reduced to a less than significant level with implementation of mitigation measure MM HM-1 (Hazardous Substance Control and Emergency Response) discussed in Section 5.9, Hazards and Hazardous Materials; no contribution to cumulative impacts would occur.

Hydrology and Water Quality. The project would not change existing drainage patterns at the site, which covered in crushed stone. The proposed project would require minimal water for dust control and concrete during construction. Dewatering during foundation excavation is possible, but not anticipated. In the event that dewatering is necessary, the water would be pumped out and treated and encountered groundwater would be tested to meet requirements set by the Regional Water Quality Control Board (RWQCB). Implementation of Mitigation measures MM HYD-1 (SWPPP or Erosion Control Plan Development and Implementation) and MM HM-1 (Hazardous Substance Control and Emergency Response) would ensure that erosion, sedimentation, or an accidently spill would not significantly affect water quality. With implementation of this mitigation, the Project's hydrology and water quality impacts are less than significant and are not considerable enough to represent a significant cumulative impact.

Land Use. The proposed project is consistent with local zoning. The project would rebuild an existing use within the existing site. In addition, the proposed project, as well as the cumulative projects, are required to minimize any impacts to state and federally listed species and/or habitats through compliance with CEQA, the federal ESA, the CESA, and/or applicable local habitat conservation plans. The project would, therefore, not conflict with applicable land use policies and regulations and would not contribute to cumulative impacts to land use.

Mineral Resources. No commercial mineral resources are known to exist within the proposed project site or vicinity. Therefore, the proposed project would not result in the loss of availability of a known mineral resource. The project would not contribute to potential cumulative impacts that may result in the loss of mineral resources.

Noise. The proposed project is not expected to contribute to a long-term cumulative impact on ambient noise levels in the area. Noise from construction activities would be audible to nearby businesses and residences, but construction would be limited to daytime hours and would be short-term. Impacts from noise to nearby sensitive receptors (e.g., residences and schools) would be less than significant through compliance with applicable noise codes. It is assumed that the cumulative projects would also be constructed during daytime. There would be a limited potential for the projects to have overlapping construction schedules for an extended duration that could result in substantial levels of combined construction noise. They are not in close proximity to the substation site such that noise from one project would combine with that of another project to create a nuisance. These projects are not likely to combine with noise generated from the construction of the Homestead Substation project to create significant adverse effects since noise reduces rapidly with distance.

Population and Housing. The proposed project would not result in impacts to population and housing. During its construction, the project would provide short-term jobs for a small workforce. Construction workers would be existing local SVP staff and contracted workers from the region. These jobs are not anticipated to result in workers relocating to the area. The project would not displace any existing housing or people. The proposed project, combined with the cumulative projects will have the potential to increase the population in the area due to increased job or housing opportunities. The proposed project itself can facilitate future planned growth by ensuring a reliable transmission system to the area. While the development of these properties may induce some population growth, this has already been accounted for through the General Plan for the City of Santa Clara. The rebuilt substation is proposed to increase system reliability and to serve planned growth in the area. The project's population and housing impacts would be less than significant and are not considerable enough to represent a significant cumulative impact.

Public Services. The proposed project would not interrupt fire or police protection services, schools, access to public parks, or other public facilities nor would it require the construction of new public service facilities. The completion of the projects in the vicinity may have the potential to also increase the demand

for public services and public facilities, including schools, parks, and fire and police protection. However, impacts from the substation rebuild project on public services would be incremental and would not contribute to a cumulatively significant impact.

Recreation. Although some workers may use nearby park facilities during project construction; however, increased use would be minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities. The cumulative projects also have the potential to increase use of park facilities, but the increased use would also be minimal. The projects would have less than significant effects on recreation and would not contribute to cumulative effects associated with other projects.

Transportation and Traffic. Construction of the proposed project would have the potential for temporary impacts to traffic volumes, level-of-service standards, road hazards, and emergency access. Use of local roads for transport of construction equipment and construction personnel would increase traffic slightly but would be temporary and short-term and would not exceed existing capacities. Impacts due to traffic and temporary lane closures as a result of the construction of the proposed project would be reduced to a less than significant level with implementation of mitigation measure MM T-1 (Construction Traffic Control Plan) discussed in Section 5.17, Transportation and Traffic. Impacts from the proposed project, combined with construction of the cumulative projects would have the potential to cumulatively impact transportation and traffic in the surrounding area; however, the construction schedules of the projects and that of the proposed project would be variable. The potential for the planned and current projects in the vicinity to require lane closures simultaneously would be a remote possibility and would be limited in duration and location. Adherence to mitigation measure MM T-1 (Construction Traffic Control Plan) would ensure that the proposed project's cumulative impacts to traffic and transportation would be incremental, short-term, and less than significant.

Tribal Cultural Resources. There are no known Tribal Cultural Resources (TCRs) listed in, or are known to be eligible for listing in, the California Register of Historical Resources (CRHR) or local register of historical resources within the proposed project site or surrounding area. However, it is possible that previously unidentified TCRs that may be eligible for inclusion in the CRHR or local registers could be discovered and damaged, or destroyed, during ground disturbance, which would constitute a significant impact absent mitigation. Implementation of mitigation measure MM TCR-1 (Management of Unanticipated Tribal Cultural Resources), discussed in Section 5.18 (Tribal Cultural Resources), would ensure evaluation and protection of unanticipated TCR discoveries. Adherence to this mitigation measure would ensure that no tribal cultural resources would be affected during project construction or during operation of the project, and no contribution to cumulative impacts would occur.

Utilities and Service Systems. The construction of the proposed project would temporarily require a minimal water supply and would potentially generate wastewater that would be appropriately treated. Construction would require the disposal of a less than significant amount of all types of waste. No expanded utility facilities or services would be needed for the project and use and disposal of all water and waste products would comply with all applicable laws and regulations. Operation and maintenance of the rebuilt substation would not require any water consumption. Therefore, a less than significant contribution to cumulative impacts to utilities and service systems would occur.

Corona and Induced Current Effects. No other planned or current project in the vicinity of the proposed project, besides the proposed project, will result in corona or induced current effects due to the nature of the purpose and design of those projects. The proposed project will not contribute to a cumulative impact to corona and induced current effects.

a. Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed project would not substantially adversely affect human beings directly or indirectly. The Initial Study identified no environmental effects that would cause substantial adverse effects on human beings. Adverse effects would be mitigated by implementation of mitigation measures and, in most instances, would be short-term construction impacts. Each type of impact with the potential to cause substantial adverse effects on human beings has been evaluated, and this Initial Study concludes that all of these potential impacts are either less than significant or can be mitigated to a less than significant level with the implementation of measures presented herein. (See Section 6, Mitigation Monitoring and Reporting Program, for a complete listing of the mitigation measures.) Therefore, the proposed project does not involve any activities, either during construction or operation, which would cause significant adverse effects on human beings that cannot be readily mitigated to a less than significant level. The proposed operation and maintenance activities would be the same as current operation and maintenance practices for the existing substation, which have minimal impacts on human beings. The potential beneficial effects of the project include improving the reliability and capacity of the existing transmission system in the City of Santa Clara.

6. Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) will be used by the City of Santa Clara and SVP to ensure that the mitigation measures adopted as a condition of project approval are implemented. The MMRP is consistent with CEQA Guidelines (Sections 15074(d), 15091(d), and 15097) for the implementation of mitigation.

SVP will be responsible for monitoring the implementation of the mitigation measures presented in Table 6-1). SVP will designate specific personnel to implement and document all aspects of the MMRP. SVP will ensure that the designated personnel have authority to enforce mitigation requirements and will be capable of terminating project construction activities found to be inconsistent with mitigation objectives. Additionally, SVP will be responsible for ensuring that construction personnel understand their responsibility to adhere to the MMRP requirements and other contractual requirements related to the implementation of mitigation.

Table 6-1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
Air Quality			
Construction-Phase Air Quality	**MM AQ-1.** Implement Basic Construction Air Quality Mitigation The project shall ensure that basic construction emissions control measures are implemented as "Best Management Practices," as follows: ▪ All exposed soil surfaces (e.g., parking areas, staging areas, soil piles, and graded areas) 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 areas to be paved shall be completed as soon as possible. Foundation pads shall be laid as soon as possible after grading. ▪ 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 regarding idling 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 SVP regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	Emissions from construction equipment exhaust are reduced	During construction
Biological Resources			
Nesting Birds	**MM BIO-1.** Biological Monitoring. A qualified biologist will be assigned to the project and will monitor the project periodically. The qualified biologist will be the point of contact for any employee or contractor who might inadvertently kill or injure a special-status species or anyone who finds a dead, injured, or entrapped individual. The qualified biologist or biological monitor shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources.	Monitor implementation of specified biological monitor activities	Prior to and during construction
Nesting Birds	**MM BIO-2.** Worker Environmental Awareness Training. Prior to construction, a construction employee education program will be conducted in reference to all sensitive environmental resources potentially affected by site work (e.g., air quality, biological resources, cultural resources, hydrology and water quality, hazardous materials) and the measures associated with their protection (i.e., mitigation measures and applicable laws and regulations).	Review and attend construction employee education program and monitor training implementation	Prior to construction
Nesting Birds	**MM BIO-3.** Preconstruction Nesting Bird Surveys and Nest Protection. A preconstruction nesting bird surveys shall be conducted of the site and vicinity by a qualified biologist no more than 7 days before any work activities are performed during the nesting season (February 1 to August 31). A Preconstruction nesting bird survey also shall be required prior to any vegetation removal or trimming that occurs during the nesting season. Surveyors will search for all potential nest types (e.g., ground, cavity, shrub/tree, structural, etc.) and determine whether the nest is active. A nest will be determined to be active if eggs or	Ensure preconstruction bird nesting surveys are conducted and monitor for significant disturbance to birds if nests are identified	No more than 7 days before planned construction work

Table 6-1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	young are present in the nest. Upon discovery of active nests, Silicon Valley Power's biological monitor will determine if there is need for a buffer or shield to minimize disturbance of the nest. Upon this determination and execution of any required minimization action, work may proceed. The extent of mitigation will be based upon: acclimation of the species or individual to disturbance, nest type (cavity, tree, ground, etc.), and level and duration of construction activity. If there is a period of 7 or more days during nesting season in which construction does not occur, a new survey shall be undertaken to determine if any nests have been established. In the unlikely event a special-status or listed species is found nesting nearby, CDFW and USFWS will be notified and the City of Santa Clara will be provided with nest survey results, if requested. When active nests are identified, monitoring for significant disturbance to the birds will be implemented.		
Cultural Resources			
Unanticipated Discoveries of Historical Resources or Unique Archaeological Resources	**MM CR-1.** Worker Training and Management of Unanticipated Discoveries of Historical Resources, Unique Archaeological Resources. SVP shall conduct a worker environmental awareness program (WEAP) for project personnel who, during the course of project work, might encounter or alter historical resources or important/unique archaeological materials. This program may be combined with any similar required program, such as for biological resources. The WEAP may include a kickoff tailgate session that describes how to identify cultural resources and what to do if an unanticipated discovery is made during construction, presents site avoidance requirements and procedures to be followed if unanticipated cultural resources are discovered during project construction, and includes a discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and SVP policies. If previously unidentified cultural resources are identified during construction, construction work within 100 feet of the find shall be halted and directed away from the discovery until a Secretary of the Interior qualified archaeologist assesses the significance of the resource. The archaeologist, in consultation with the City of Santa Clara, State Historic Preservation Officer, any interested Tribes, and any other responsible public agency, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be eligible to the National or California Registers, qualify as a unique archaeological resource under California Environmental Quality Act Section 21083.2, or are determined to be tribal cultural resource as defined in Section 21074.	Review and attend worker environmental awareness program; Monitor implementation of unanticipated discovery protocols	Prior to construction and during construction
Unanticipated Discoveries of Human Remains	**MM CR-2.** Treatment of Human Remains. Any human remains discovered are to be treated with respect and dignity. Upon discovery of human remains, all work within 50 feet of the discovery area must cease immediately, nothing is to be disturbed, and the area must be secured. The Santa Clara County Coroner's Office must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner of the site is to be called and informed of the discovery. If the remains are located on federal lands, federal land managers, federal law enforcement, and the federal archaeologist must be informed as well, due to complementary jurisdiction issues. It is very important that the suspected remains, and the area around them, are undisturbed and the proper authorities called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are archaeological/ historic or of modern origin and if there are any criminal or jurisdictional questions. After the Coroner has determined the remains are archaeological/historic-era, the Coroner will make recommendations concerning the treatment and disposition of the remains to the person responsible for	Monitor implementation of human remain discovery protocols	During construction

Table 6-1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American, he/she shall contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48 hours to make recommendations to the landowner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC. According to the California Health and Safety Code, six (6) or more human burials at one (1) location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).		
Geology and Soils			
Seismically-Induced Liquefaction	**MM G-1.** Conduct Geotechnical Investigations for Liquefaction. Because seismically induced liquefaction-related ground failure has the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for liquefaction to affect the new project poles and substation components at the project site. Where liquefaction hazards are found to exist/verified, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include bigger foundations, installation of flexible bus connections, and/or incorporation of slack in cables to allow ground deformations without damage to structures.	Ensure a design-level geotechnical investigation is performed	At least 60 days before final Project design
Expansive Soils	**MM G-2.** Conduct Geotechnical Investigations for Expansive Soils**.** Because expansive soils have the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for expansive soils to affect the new project components at the project site. Where expansive soils are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate impacts from expansive soil could include over-excavation and replacement with engineered fill or soil improvements.	Ensure a design-level geotechnical investigation is performed	At least 60 days before final Project design
Unanticipated Discoveries of Paleontological Resources	**MM G-3.** Worker Training and Management of Unanticipated Discoveries of Paleontological Resources. In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing or other construction activities, a paleontologist must be retained who meets the professional paleontologist qualifications (Society of Vertebrate Paleontology's Standard Procedures, 2010) and has demonstrated experience in carrying paleontological projects to completion. This qualified paleontologist must develop and implement a Paleontological Resources Management Plan (PRMP) for the project area that meets the standards set forth by the Society of Vertebrate Paleontology (2010). This shall include: ▪ A Worker Environmental Awareness Program (WEAP) wherein all construction personnel are trained on the processes to be followed upon encountering any fossils.	Review Paleontological Resource Monitoring Program; Monitor implementation of Program	Prior to construction and during construction

Table 6-1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	▪ A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. Monitors shall be onsite for any disturbance of sediments with high or unknown paleontological sensitivity. Monitors must have demonstrated sufficient paleontological training and field experience to have acceptable knowledge and experience of fossil identification, salvage and collection methods, paleontological techniques, and stratigraphy. ▪ A recovery plan for significant fossils that provides for the treatment of specimens to the point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. ▪ A specimen identification, analysis, and curation plan that includes identification to the lowest taxonomic level possible; taxonomic, taphonomic, and biostratigraphic analysis; and curation to the standards of the repository where they will be curated.		
Hazards and Hazardous Materials			
Hazardous Substances Control	**MM HM-1.** Hazardous Substance Control and Emergency Response. SVP shall implement its hazardous substance control and emergency response. procedures as needed. These procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on site. If it is necessary to store chemicals on site, they shall be managed in accordance with all applicable regulations. Material safety data sheets shall be maintained and kept available on site, as applicable. No known soil contamination was identified within the project area. In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested and, if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations. All hazardous materials and hazardous wastes shall be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following: ▪ Proper disposal of potentially contaminated soils. ▪ Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources. ▪ Emergency response and reporting procedures to address hazardous material spills. ▪ Stopping work at that location and contacting the City Fire Department Hazardous Materials Division immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Division.	Collect and analyze soil samples and, if contamination is discovered, ensure that construction activities are conducted according to SVP's hazardous substance control and emergency response procedures	Prior to construction and during construction

Table 6-1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	SVP shall complete its Emergency Action Plan Form as part of project tailboard meetings. The purpose of the form is to gather emergency contact numbers, identify first aid locations and provide other tailboard safety information.		
Hydrology and Water Quality			
Water Quality	**MM HYD-1.** SWPPP or Erosion Control Plan Development and Implementation. Following project approval, SVP will prepare and implement a SWPPP, if required by State law, or erosion control plan to minimize construction impacts on surface water and groundwater quality. Implementation of the SWPPP or erosion control plan will help stabilize graded areas and reduce erosion and sedimentation. The plan will designate BMPs that will be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, covers, and silt fences, will be installed before the onset of winter rains or any anticipated storm events. Suitable stabilization measures will be used to protect exposed areas during construction activities, as necessary. During construction activities, measures will be in place to prevent contaminant discharge. The project SWPPP or erosion control plan will include erosion control and sediment transport BMPs to be used during construction. BMPs, where applicable, will be designed by using specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as properly containing stockpiled soils. Erosion control measures identified will be installed in an area before construction begins during the wet season and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, will remain in place until disturbed areas have stabilized. The plan will be updated during construction as required by the SWRCB. A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials management and spill response. Compliance with these requirements will be ensured by the on-site construction contractor.	Ensure a SWPPP is prepared and implemented, or if a SWPPP is not required, ensure that an erosion control plan is developed and implemented to minimize construction impacts on surface water and groundwater quality	Prior to and during construction
Traffic/Transportation			
Traffic Control	**MM T-1.** Construction Traffic Control Plan. Prior to the start of construction, Silicon Valley Power (SVP) shall prepare and submit a Construction Traffic Control Plan for review and approval to the City of Santa Clara (City) Planning Department for public roads and transportation facilities that would be directly affected by the construction activities and/or would require permits and approvals. SVP shall submit the Construction Traffic Control Plan to the City prior to conducting activities covered in the traffic control permits. The Construction Traffic Control Plan shall include, but not be limited to: ▪ Identification of any routes that would require lane closures or detours to accommodate material and equipment deliveries and methods to ensure safety. ▪ Avoidance of peak travel hours (8:00 10:00 a.m. and 4:00 6:00 p.m.) to the maximum extent feasible. ▪ Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by SVP of the	Ensure that a Construction Traffic Control Plan is submitted by SVP and approved by the City of Santa Clara	Prior to construction

Table 6-1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles. ▪ Plans to coordinate in advance with property owners, if any, that may have limited access to properties.		
Tribal Cultural Resources			
Unanticipated Tribal Cultural Resources	**MM TRC-1.** Management of Unanticipated Tribal Cultural Resources. During project-level construction, should subsurface tribal cultural resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist and an authorized tribal representative shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5 and Section 21074. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to tribal cultural resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in the tribal cultural resource.	Confirm that all activity in the vicinity of a found subsurface tribal cultural resource is ceased and that an authorized tribal representative is contacted	During construction

7. References

Aesthetics

Caltrans (California Department of Transportation). 2021. "California Scenic Highway System Map" https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed December 17, 2021.

City of Santa Clara. 2014. City of Santa Clara General Plan – Chapter 5: Goals and Policies. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed December 10, 2021.

Agricultural Resources

DOC (California Department of Conservation). 2017. Williamson Act Program Map. https://planning.lacity.org/eir/HollywoodCenter/Deir/ELDP/(E)%20Initial%20Study/Initial%20Study/Attachment%20B%20References/California%20Department%20of%20Conservation%20Williamson%20Map%202016.pdf. Accessed December 10, 2021.

_____. 2016. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 10, 2021.

Air Quality

ARB (Air Resources Board). 2016. Ambient Air Quality Standards Chart. https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed February 2, 2022.

Aspen (Aspen Environmental Group). 2022. AQ and GHG Emissions Summary, Homestead Substation Rebuild. From: CalEEMod.2020.4.0; Date: 1/19/2022.

BAAQMD (Bay Area Air Quality Management District). 2017. Air Quality and Attainment Status, updated January 2017. http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed December 17, 2021.

Biological Resources

City of Santa Clara. 2014. City of Santa Clara General Plan. City Council adopted on November 16, 2010. Updated December 9, 2014. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed December 10, 2021.

Cultural Resources

Broek, J.O.M. 1932. The Santa Clara Valley, California: A Study in Landscape Changes. N.v.A. Oosthoek's Utig. Maadtij, Utrecht.

Clark, M.R. 1989. Evaluative Archaeological Investigations at the San Bruno Mountain Mound Site, CA-SMA-40, South San Francisco, California. Report on file, Northwest Information Center, Sonoma State University, Rohnert Park, CA.

Cutter, D.C. 1978. Plans for the Occupation of Upper California: A New Look at the "Dark Age" from 1602 to 1769. Journal of San Diego History 24(1):78-90.

Findlay, J.M. and D.M. Garaventa. 1983. Archaeological Resources of Downtown San Jose: A Preliminary Planning Summary of Prehistoric and Historic Sites in the Central Business District. MS on file, S-5905, CHRIS/NWIC, CSU Sonoma, Rohnert Park.

Fitzgerald, R.T. and J. Porcasi. 2003. The Metcalf Site (CA-SCL-178) and Its Place in Early Holocene California Prehistory. Society for California Archaeology Newsletter 37(4):27-31.

Fitzgerald, R.T. 1993. Archaic Milling Cultures of the Southern San Francisco Bay Region. Archives of California Prehistory 35. Coyote Press, Salinas.

Hart, J.D. 1987. A Companion to California (revised and expanded). Oxford University Press, New York.

Heizer, R.F. 1952. A Review of Problems in the Antiquity of Man in California. In Symposium of the Antiquity of Man in California, pp. 1-10. Reports of the University of California Archaeological Survey No. 16:3-17.

_____. 1950. Observations on Early Man in California. In Papers on California Archaeology: 1-5, pp. 5-10. Reports of the University of California Archaeological Survey No.7, Berkeley.

_____. 1949. The Archaeology of Central California, L· The Early Horizon. University of California Anthropological Records. University of California Press, Berkeley. 12(1):1-84.

Heizer, R.F., and S.F. Cook. 1953. "Capay Man," An Ancient Central California Indian Burial. In Papers on California Archaeology: 21-26, edited by Richard F. Heizer. Reports of the University of California Archaeological Survey 22:24-26, University of California, Berkeley, Department of Anthropology.

Hendry, G.W. and J.N. Bowman. 1940. The Spanish and Mexican Adobe and Other Buildings in the Nine San Francisco Bay Counties, 1776 to about 1850 (and associated maps). MS on file, Bancroft Library, University of California, Berkeley.

Hildebrandt, W.R. 1983. Archaeological Research of the Southern Santa Clara Valley Project: Based on a Data Recovery Program from Sites CA-SCl-54, CA-SCl-163, CA-SCl-178, CA-SCl-237, and CA-SCl-241 Located in the Route 101 Corridor, Santa Clara County, California. Submitted to California Department of Transportation, District 4, San Francisco. Report S-6369. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, CA.

Levy, R. 1978. Costanoan. In California, edited by R.F. Heizer, Volume 8. Handbook of North American Indians, W.G. Sturtevant, general editor, pp. 485-497. Smithsonian Institution, Washington, D.C.

Lillard, J.B., R.F. Heizer, and F. Fenenga. 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College Department of Anthropology Bulletin 2. Board of Education of the Sacramento City Unified School District, Sacramento, California.

Meighan, C.W. 1965. Pacific Coast Archaeology. The Quaternary of the United States, edited by H.E. Wright and D.G. Frey.

Winter, J.C. 1935. Archaeological Investigations at CA-SCl-128, The Holiday Inn Site. For the Ohlone People and the Redevelopment Agency of the City of San Jose, California. MS on file, S-5281, CHRIS/NWIC, CSU Sonoma, Rohnert Park.

Energy

CEC (California Energy Commission). 2022a. 2020 Power Content Label for City of Santa Clara/Silicon Valley Power. https://www.energy.ca.gov/filebrowser/download/3852. Accessed February 3, 2022.

_____2022b. Electricity Consumption by Entity. http://www.ecdms.energy.ca.gov/elecbyutil.aspx. Accessed February 3, 2022.

CPUC (California Public Utilities Commission). 2008. Energy Action Plan, 2008 Update. February. http://www.cpuc.ca.gov/eaps/.

City of Santa Clara. 2020. Utility Fact Sheet. Electric Utility: City of Santa Clara. January–December 2020. http://www.siliconvalleypower.com/svp-and-community/about-svp/utility-fact-sheet.. Accessed December 17, 2021.

SVP (Silicon Valley Power). 2019. Revised 2018 Integrated Resource Plan for Silicon Valley Power. Adopted by the Santa Clara City Council, November 27, 2018. http://www.siliconvalleypower.com/svp-and-community/about-svp/integrated-resource-plan.

Geology and Soils

CGS (California Geological Survey). 2022. Earthquake Zones of Required Investigation. https://maps.conservation.ca.gov/cgs/EQZApp/app/

_____. 2018. Earthquake Fault Zones, CGS Special Publication #42. Special Publication 42: Earthquake Fault Zones – A Guide for Government Agencies, Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California (2018)

_____. 2002. Seismic Hazard Zone Report for the San Jose West 7.5-Minute Quadrangle, Santa Clara County, California. https://maps.conservation.ca.gov/cgs/EQZApp/app/

City of Santa Clara. 2014. City of Santa Clara 2010-2035 General Plan. City Council adopted on November 16, 2010. Updated December 9, 2014. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed December 10, 2021.

_____. 2011. City of Santa Clara Draft 2010-2035 General Plan: Integrated Final Environmental Impact Report. January 2011. http://santaclaraca.gov/home/showdocument?id=12900.

County of Santa Clara. 2012. "Santa Clara County Geologic Hazard Zones." https://stgenpln.blob.core.windows.net/document/GEO_GeohazardATLAS.pdf. Accessed January 6, 2022

DWR (Department of Water Resources). 2022. Water Data Library Groundwater Levels. https://wdl.water.ca.gov/WaterDataLibrary/GroundwaterBrowseData.aspx?LocalWellNumber=&StationId=56517&StateWellNumber=08S02E35M001M&SelectedCounties=&SiteCode=371926N1217298W001&SelectedGWBasins=

Dibblee, T.W., and Minch, J.A. 2007. Geologic map of the Cupertino and San Jose West quadrangles, Santa Clara and Santa Cruz Counties, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-351, scale 1:24,000. https://ngmdb.usgs.gov/ngm-bin/pdp/zui_viewer.pl?id=34651. Accessed February 2022.

Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf. Accessed January 9, 2022.

NRCS (Natural Resources Conservation Service). 2022. Web Soil Survey, Project Area Map and Data. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 2022.

USGS (United States Geological Survey). 2022. Earthquakes Hazard Program, Earthquake Catalog website. https://earthquake.usgs.gov/earthquakes/search/

_____. 2014. 2014 USGS National Seismic Hazard Maps GIS Shapefiles "Two-percent probability of exceedance in 50 years map of peak ground acceleration" Map. https://www.usgs.gov/programs/earthquake-hazards/science/2014-united-states-lower-48-seismic-hazard-long-term-model. Accessed January 9, 2022.

Youd, T.L. and D.M. Perkins. 1978. Mapping Liquefaction Induced Ground Failure Potential, in the Proceedings of the American Society of Civil Engineers, Journal of the Geotechnical Engineering Division.

Greenhouse Gas Emissions

ARB (Air Resources Board). 2021. California Greenhouse Gas Inventory for 2000-2019, by Category as Defined in the 2008 Scoping Plan. July. https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-19.pdf. Accessed January 4, 2022.

_____. 2017. California's 2017 Climate Change Scoping Plan. November.

Aspen (Aspen Environmental Group). 2022. AQ and GHG Emissions Summary, Homestead Substation Rebuild. From: CalEEMod.2020.4.0; Date: 1/19/2022.

BAAQMD (Bay Area Air Quality Management District). 2017. Air Quality and Attainment Status, updated January 2017. http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed March 9, 2022.

IPCC (Intergovernmental Panel on Climate Change). 2014. Drivers, Trends, and Mitigation; and Energy Systems. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom, and New York, NY, USA.

OEHHA (Office of Environmental Health Hazard Assessment, California Environmental Protection Agency). 2018. *Indicators of Climate Change in California*. May.

UNFCCC (United Nations Framework Convention on Climate Change). 1998. Text of the Kyoto Protocol.

Hazards and Hazardous Materials

CAL FIRE (California Department of Forestry and Fire Protection). 2021. Fire Hazard Severity Zones Viewer. https://egis.fire.ca.gov/FHSZ/. Accessed December 17, 2021.

City of Santa Clara. 2014. City of Santa Clara General Plan – Chapter 5: Goals and Policies. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan.

DTSC (California Department of Toxic Substances Control). 2021a. "Cortese List Data Resources." https://www.envirostor.dtsc.ca.gov/public/search?CMD=search&ocieerp=&HWMP=False&business_name=santa+clara&main_street_name=&city=&zip=&county=&censustract=&case_number=&apn=&Search=Get+Report. Accessed September 30, 2021.

_____. 2021b. "EnviroStor Database." https://www.envirostor.dtsc.ca.gov/public/map/?global_id=60002982. Accessed December 3, 2021.

SWRCB (State Water Resources Control Board). 2022. State Water Resources Control Board GeoTracker, Mariposa Gardens Shopping Center (SL0608531621). https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0608531621. Accessed February 2022.

_____. 2021. "Geotracker." https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=santa+clara# Accessed December 3, 2021.

Hydrology and Water Quality

DWR (California Department of Water Resources). 2022. Bulletin 118 Groundwater Basin Lookup. https://dwr.maps.arcgis.com/apps/Styler/index.html?appid=740d10eefd6148579321a3abcd065a36. Accessed February 2022.

_____. 2003. Bulletin 118 Update 2003 – Basin Report 2_009_02. https://data.cnra.ca.gov/dataset/bulletin-118-update-2003-basin-reports/resource/20296ca3-a155-4285-8786-b775b89b9033

City of Santa Clara. 2014. City of Santa Clara General Plan – Chapter 5: Goals and Policies. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed December 3, 2021.

SWRCB (State Water Resources Control Board). 2022. Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report), Supporting Information Regional Board 2 – San Francisco Bay Region, Water Body Name: Saratoga Creek. https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/00686.shtml#34563. Accessed February 2022.

FEMA (Federal Emergency Management Agency). 2020. Online flood map 06085C0228H, effective 05/18/2009. https://msc.fema.gov/portal/home. Accessed May 17, 2021

Land Use and Planning

City of Santa Clara. 2014a. City of Santa Clara Zoning Map http://santaclaraca.gov/home/showdocument?id=756. Accessed December 7, 2021.

_____. 2014b. City of Santa Clara General Plan – Chapter 5: Goals and Policies. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed September 17 , 2021.

Mineral Resources

DOC (California Department of Conservation). 2021a. "CGS Information Warehouse: Mineral Land Classification." https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed December 7, 2021.

_____. 2021b. "SMARA Statutes and Regulations." https://www.conservation.ca.gov/dmr/lawsandregulations. Accessed December 17, 2021.

City of Santa Clara. 2014. City of Santa Clara 2010-2035 General Plan. City Council adopted on November 16, 2010. Updated December 9, 2014. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed December 10, 2021.

Noise

FHWA (Federal Highway Administration). 2006. Roadway Construction Noise Model, User's Guide. January. http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf. Accessed December 7, 2021.

OPR (Governor's Office of Planning and Research). 2017. General Plan Guidelines: 2017 Update. Updated September 2017. http://www.opr.ca.gov/planning/general-plan/guidelines.html. Accessed December 17, 2021.

U.S. EPA (U.S. Environmental Protection Agency). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. No. 550/9-74-004, Washington, D.C.

USGS (U.S. Geological Survey). 2021 "Mineral Resources Data Systems (MRDS)." https://mrdata.usgs.gov/mrds/map-us.html. Accessed December 7, 2021.

Population and Housing

CA DOF (California Department of Finance). 2021. E-5: Population and Housing Estimates for Cities, Counties, and the State, January 2011-2017 with 2010 Census Benchmark. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/. Accessed December 7, 2021.

CA EDD (California Employment Development Department). 2021. Labor Force and Unemployment Rate for Cities and Census Designated Places – 2016 Annual Average. http://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html. Accessed December 7, 2021.

_____. 2014a. City of Santa Clara General Plan – Chapter 5: Goals and Policies. http://santaclaraca.gov/home/showdocument?id=13934. Accessed September 17 , 2021.

_____. 2014b. City of Santa Clara General Plan – Appendix 8.12 Housing Element. http://santaclaraca.gov/home/showdocument?id=13932. Accessed September 17 , 2021.

Public Services

City of Santa Clara. 2021a. "Santa Clara Police Department – Fact Sheet." http://santaclaraca.gov/government/departments/police-department/about-us/fact-sheet. Accessed December 13, 2021.

_____. 2021b. "Santa Clara Police Department – Divisions." Divisions | City of Santa Clara (santaclaraca.gov) Accessed December 13, 2021

_____. 2021c. "City of Santa Clara: Parks and Pools." http://arcg.is/2zfXbE1. Accessed September 24, 2021.

_____. 2014. City of Santa Clara General Plan – Chapter 5: Goals and Policies. http://santaclaraca.gov/home/showdocument?id=13934. Accessed September 24, 2021.

Recreation

City of Santa Clara. 2021c. "City of Santa Clara: Parks and Pools." http://arcg.is/2zfXbE1. Accessed September 24, 2021.

_____. 2014a. City of Santa Clara General Plan – Chapter 5: Goals and Policies. http://santaclaraca.gov/home/showdocument?id=13934. Accessed September 24, 2021.

_____. 2014b. City of Santa Clara General Plan – Parks and Recreation Inventory. https://www.santaclaraca.gov/home/showpublisheddocument/12892/635713044859030000. September 24, 2021.

Traffic and Transportation

Caltrans (California Department of Transportation). 2020. 2020 Traffic Volumes on California State Highways." https://dot.ca.gov/programs/traffic-operations/census. Accessed December 15, 2021.

City of Santa Clara. 2014. City of Santa Clara General Plan – Chapter 5: Goals and Policies. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed September 24, 2021.

_____. 2013. "2013 City of Santa Clara Bicycle Map." http://santaclaraca.gov/home/showdocument?id=1326. Accessed September 24, 2021.

_____. 2011. City of Santa Clara Draft 2010-2035 General Plan: Integrated Final Environmental Impact Report. January 2011. http://santaclaraca.gov/home/showdocument?id=12900.

VTA (Valley Transit Authority). 2021a. Routes. https://www.vta.org/go/routes. Accessed December 15, 2021.

_____. 2021b. Valley Transit Authority Transit Map. October 11, 2021. https://www.vta.org/sites/default/files/2021-10/VTA_MainMap_101121.pdf. Accessed December 15, 2021.

_____. 2020. Santa Clara Valley Bikeways Map. June 2020. https://www.vta.org/sites/default/files/2020-07/2020%20Bike%20Map_web_p2.pdf. Accessed December 15, 2021.

Tribal Cultural Resources

City of San Jose. 2011. Envision San Jose 2040 General Plan. Adopted November 1, 2011.

Golla, V. 2011. California Indian Languages. University of California Press, Berkeley.

Hendry, G.W., and J.N. Bowman. 1940. The Spanish and Mexican Adobes and Other Buildings in the Nine San Francisco Area Counties, 1776 to about 1810. Ms. on file, Bancroft Library, University of California, Berkeley.

King, C.D. 1977. Matalan Ethnohistory. In Final Report of Archaeological Test Excavations of Freeway 04-SCl-101, Post Mile 17.2/29.4, Cochrane Road to Ford Road, edited by S.A. Dietz. MS on file, S-4395, CHRIS/NWIC, CSU Sonoma, Rohnert Park.

Levy, R. 1978. Costanoan. In California, edited by R.F. Heizer, Volume 8. Handbook of North American Indians, W.G. Sturtevant, general editor, pp. 485-497. Smithsonian Institution, Washington, D.C.

_____. 1976. Costanoan Internal Relationships. Non-Serial Publication, University of California Archaeological Research Facility, Berkeley.

Margolin, M. 1978. The Ohlone Way: Indian Life in the San Francisco–Monterey Bay Area. Heyday Books, Berkeley.

OPR (Office of Planning and Research). 2017.Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA. https://www.opr.ca.gov/docs/20200224-AB_52_Technical_Advisory_Feb_2020.pdf.

Utilities and Service Systems

Allconnect. 2022. Shop Plans in Santa Clara, CA for Zipcode 95051. https://www.allconnect.com/results/providers?zip=95051. Accessed February 4, 2022.

CalRecycle. 2021a. Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn) (41-AA-0002). http://www.calrecycle.ca.gov/SWFacilities/Directory/41-AA-0002/Detail/. Accessed December 13, 2021.

_____. 2021b. Facility/Site Summary Details: Guadalupe Sanitary Landfill (43-AN-0015). http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0015/Detail/. Accessed December 13, 2021.

_____. 2021c. Facility/Site Summary Details: Newby Island Sanitary Landfill (43-AN-0003). http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0003/Detail/. Accessed December 13, 2021.

City of Santa Clara. 2020. Utility Fact Sheet. Electric Utility: City of Santa Clara. January – December 2016. http://www.siliconvalleypower.com/svp-and-community/about-svp/utility-fact-sheet. Accessed December 13, 2021.

_____. 2014. City of Santa Clara General Plan Chapter 5: Goals and Policies. https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan. Accessed September 24, 2021.

City of San Jose. 2021. San Jose–Santa Clara Regional Wastewater Facility. https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility. Accessed December 20, 2021.

Wildfire

CAL FIRE (California Department of Forestry and Fire Protection). 2022. Fire Hazard Severity Zones map viewer. https://egis.fire.ca.gov/FHSZ/. Accessed February 24, 2022.

Corona and Induced Current Effects

IEEE (Institute of Electrical and Electronic Engineers). 1979. J.E. Bridges and M.J. Frazier. The Effect of 60 Hertz Fields and Currents on Cardiac Pacemakers. Page 30.

_____. 1971. Radio Noise Subcommittee Report – Working Group No. 3. Radio Noise Design Guide for High Voltage Transmission Lines. IEEE Transactions on Power Apparatus and Systems, Volume PAS-90, Number 2, p. 833.

Mandatory Findings of Significance

City of Santa Clara. 2022. “Planning Tracking Excel Table updated 12-20-21.” Provided by City Planning Department, March 7, 2022.

8. Comments and Comment Responses

This section presents responses to the comments received during the public review period for the Mitigated Negative Declaration. SVP received three public comments from the various State agencies, tribes, and the public that were notified of the intent to adopt the Mitigated Negative Declaration.

Table 8-1 lists the persons and agencies that submitted comments on the Proposed MND. The individual comments are numbered, and responses immediately follow the comments. No revisions were made to the MND and supporting Initial Study based on the comments.

Table 8-1. Comments Received on the Proposed Mitigated Negative Declaration

Commenter	Date of Comment	Comment Set
Santa Clara Valley Water District	12/28/2022	A1
Kinson Tam	12/07/2022	B1
Kinson Tam	12/15/2023	B2

Comment Set A1 – Santa Clara Valley Water District

From: Shree Dharasker <sdharasker@valleywater.org>
Sent: Wednesday, December 28, 2022 10:58:01 AM
To: kkeating@santaclaraca.gov <kkeating@santaclaraca.gov>; Hedy Koczwara <Hkoczwara@aspeneg.com>
Cc: Michael Martin <MichaelMartin@valleywater.org>
Subject: RE: SVP Homestead Substation Rebuild Project – Notice of Intent to Adopt an MND

Dear Ms. Heesh:

The Santa Clara Valley Water District has reviewed the Draft Mitigated Negative Declaration (MND) and supporting Initial Study (IS) for the Homestead Substation Rebuild Project (Project), received on November 18, 2022.

The Project Site is located at the intersection of Homestead road and Kiely Boulevard, adjacent to Saratoga Creek in Santa Clara. Valley Water has no right of way or facilities at the proposed site. The project site is located in FEMA Flood Zone X (the area determined to be outside the 500-year flood), and is considered to be a low risk flood zone.

Because the proposed Project is located adjacent to Saratoga Creek, Construction plans should be consistent with Valley Water's Guidelines and Standards for Land Use Near Streams, specifically chapters 3 and 6. Elements to consider are setbacks for environmental purposes, including enhancements for trail purposes and for flood protection benefits. Valley Water strongly advocates for maximizing vegetated areas to enhance the riparian corridor by increasing setbacks from the existing creek top of bank to any hardscape, roadways, or parking areas associated with the Project. **A1-1**

Most new development and redevelopment is subject to stormwater quality requirements. Some of the methods used to meet these requirements, such as low impact development (LID), work by retaining stormwater on the site for infiltration, which supports natural groundwater recharge. However, other methods only work to improve the quality of stormwater prior to releasing it into the stormwater system. The proposed Project should meet all California State Standards. **A1-2**

Please contact me if there are any questions,

Shree Dharasker
Associate Engineer Civil
Community Projects Review Unit
(408)630-3037

Responses to Comment Set A1 – Santa Clara Valley Water District

A1-1 The commenter for SCVWD notes that project construction should be consistent with Valley Water guidelines and standards for land use near streams. The commenter notes various types of elements to consider, such as setbacks, enhancement for trails, and flood protection.

SVP is aware of the SCVWD guidelines and standards. The substation rebuild would occur within the existing fenced property and, while near Saratoga Creek, is at low risk of flooding. No part of the project would extend into SCVWD-managed land adjacent to the creek, which is an unpaved access road outside of the north fence line of the project. The creek-side area is fenced and not available for public access. The substation project is set back from the existing creek top of bank. The proposed concrete block wall around the substation would prevent direct runoff to the creek. Site drainage would be to an existing storm sewer. During final design, it would be determined if on-site detention of stormwater is needed.

A1-2 The commenter notes that development is subject to stormwater quality requirements, and the project should meet all State standards.

A Stormwater Pollution Prevention Plan (SWPPP) would be implemented during construction to ensure that sediment or silt-laden water does not migrate offsite and enter the creek. The final project would include paving of the existing compact rock surface of the property, reducing the potential for erosion of soil/silt that otherwise might enter the stormwater system and Saratoga Creek. The project would meet all standards applicable to stormwater management during construction and subsequent operation.

Comment Set B1 – Kinson Tam (12/7)

Email: Homestead Substation Rebuild Project EIR Team

From: KK SL <kkslus@gmail.com>
Sent: Wednesday, December 07, 2022 10:01 AM
To: Kevin Keating <KKeating@santaclaraca.gov>
Subject: Homestead Substation Rebuild Project

Dear Mr. Keating:

I have several questions/concerns regarding this project. I am one of the owners of 2851 Homestead Road Apartments:

1. What is the set back of the 13' concrete block wall from the property line? **B1-1**
2. The layout you posted online does not have dimensions. Could you provide dimensions and elevations? **B1-2**

I would like to make an appointment with you to further understand this project as the deadline is approaching. Please feel free to call or text me at 408-203-1488 or email me at kkslus@gmail.com. Thank you.

Kim Tam
408-203-1488

Responses to Comment Set B1 – Kinson Tam (12/7)

Mr. Kinson Tam owns/manages the Homestead Road Apartments, the rear of which faces the south side of the Homestead Substation site. He communicated with SVP during the IS/MND comment period, requesting a meeting and providing two written comments. Comment B1 is a December 7, 2022, email requesting a meeting and providing two comments.

B1-1 The commenter asks what is the setback from the property line of the concrete block wall proposed to surround the substation site?

Per the City of Santa Clara Planning Department, no setback is required for a fence or wall around the site. Typically, SVP constructs walls around its facilities at or near the property line. The question of setbacks also is addressed in responses B2-2, B2-3, B2-7 and B2-8 below.

B1-2 The commenter requests dimension for the proposed layout, including dimensions and elevations.

See response B2-7.

Comment Set B2 – Kinson Tam (12/15)

Kinson Tam, Manager
Vineyard et. LLC
2851 Homestead Rd, Santa Clara.
kkslus@gmail.com
(408) 203-1488

To: Silicon Valley Power
Project Title: Homestead Substation Rebuild Project
Attention: Kevin Keating, Project Manager, Electronic Division Manager
Email: kkeating@santaclaraca.gov
Phone: (408) 615-6611

Date: December 15th, 2022

Our family owns the 23-unit apartment complex at 2851 Homestead Road, immediately adjacent to the proposed power plant. The proposed power plant upgrade project will have enormous negative impact on our tenants and our property value. I am shocked to learn that City of Santa Clara plans to triple the capacity of a substation in the middle of a densely populated residential multifamily neighborhood with plans for future expansions of more transmission lines less than 5 feet away from our structure:

1. Your report did NOT mention impact of existing PCBs in soil during and after excavation. Existing PCBs in soil are likely to be disturbed and airborne during the construction period: Polychlorinated Biphenyls (PCBs) are highly toxic and carcinogenic compounds which were frequently found in transformer fluids. They are very resistant to degradation and may persist in the environment for a long period of time. Because of their ubiquitous usage in the past in the electrical industry, their presence in the substation must be explored and documented during design stage and BEFORE start of the project. This is especially true for the proposed project where soil may be disturbed and moved. To evaluate and mitigate exposures to PCBs for the proposed project there should be a soil survey of possible PCBs contamination at the substation. This survey should be included in the evaluation of the necessity for an environmental impact study and negative declaration. **B2-1**

2. The current reports fail to present the impact of the new structure height on the surrounding community. The report mentioned the height and provided a plan view of the new structure, but they do not allow the average person to determine the impact of this change. What is missing from the report are perspective views from four directions along with the inclusion of neighboring structures. Also provide photo mark-ups with the proposed new structure overlaying on the existing structure. As I mentioned before, our property is the closest to and most negatively affected by this project. **B2-2**

3. The new proposed wall will have a profound visual impact to both ground level viewers and particularly to second story tenants. As your report states, the expanded substation and the new wall will be visible from the windows of the second-floor apartments and the appearance of the substation from the residents' living spaces will negatively impact their view. Trees are a natural and attractive way to screen the substation from view, and they would also provide other benefits such as improved air quality and noise reduction. There are currently trees on site between the substation and apartment complex, and we believe that adding trees to this area would enhance the aesthetics of the area and the newly proposed 13-foot wall while also helping to improve the overall environment. **B2-3**

4. Driveway Access: City of Santa Clara owns a lot with an easier and less disturbing entry to the proposed upgrade site. Page 4-4, Paragraph 4.10.4.1 indicates secondary entry through our drive, which is totally NOT acceptable. **B2-4**

5. Page 5.13-4 indicates individual equipment noise. Are you only use ONE equipment at a time? What is the total noise level when all equipment is used at the same time? Your report says a pickup truck is 75dBA when 50 feet away. A single equipment is at lease 80dBA, which more than doubles noise produced by pickup truck. Based on your estimate, 25 workers and 25 equipment will be working at the same time, which will be very disturbing and loud. **B2-5**

6. Ground vibration during construction may cause cracks and ground shifts. We will assess damage/repair and seek reimbursement from City of Santa Clara. **B2-6**

7. Site plan, elevation, set back and landscaping/screening drawings are not provided, therefore further review of negative impact is needed. **B2-7**

8. 13-ft concrete fence is higher than our 2nd floor balconies and windows. What is the setback from the property line? Landscaping screening is absolutely required. Without landscaping drawing, it is hard to determine the magnitude of negative impact. **B2-8**

9. Lighting nearby the gate (entry to power plan from our driveway) must be lower than 4 feet as required by pathway standard. Since you own the lot with a commercial building on Kiely Blvd, there is no need to build a high light post near our building, which disturbs our tenants. Lights must be below eye level with motion sensor, less than 40 watts, and point away from our apartment building. **B2-9**

10. The site plan must include preserving the existing oak trees, other trees/brushes, and other existing landscaping. More landscaping shield is absolutely required due to massive add on structures. **B2-10**

11. Since we do not have sufficient information from Silicon Valley Power to make mitigated negative declaration. We reserve the right to add to this list. **B2-11**

12. Current outgoing transmission lines are very close to our apartment units (only four feet ten inches). It is fire hazard in the event of high wind or dropped wires. We do not want to see another Camp Fire. We would like to have them moved further away from us. **B2-12**

13. We would like City to put in a new driveway after construction/upgrade. The existing driveway was damaged by fire station expansion and power plant ingress and egress. **B2-13**

Responses to Comment Set B2 – Kinson Tam (12/12)

Comment B2 provides detailed comments provided by Mr. Tam on December 15, 2022, subsequent to meeting with SVP. He thinks the proposed substation upgrade will have a negative impact on his tenants and his property value.

B2-1 The commenter believes polychlorinated biphenyls (PCB) may be present in the soil at the substation and would be disturbed during and after excavation, causing them to become air-borne. The commenter thinks the potential presence of PCB contamination at the substation must be explored and documented during the design stage, and before construction.

PCBs were widely used in the past, including in the electric industry. In the past, PCB oil was commonly used in transformers. Transformers on site today have less than 5 parts per million (ppm) of PCB content in the cooling oil, which is the industry designation for a non-PCB content. A typical action undertaken by SVP during project design is to take soil samples and test for various hazardous materials. This will inform SVP as to what precautions and special handling, if any, might be required for soils that are to be disturbed during construction. This will ensure that PCB contamination or other hazardous contamination is identified, if present, and properly handled so as to not become mobilized and migrate offsite. Any contaminated soil would be handled and disposed of in accordance with federal and state regulations.

B2-2 The commenter thinks the IS/MND fails to present the visual impact of the height of new structures on the surrounding community and should include information on the height of structures and a plan view for consideration by the community. The commenter thinks that perspective views from four directions should be included along with photo mock-ups.

Views of the substation from publicly accessible areas are limited. The substation is an interior property surrounded by residential, commercial, and park land uses. It does not front on a public street. See IS/MND Figure 4.1 Homestead Substation Location. A plan view of the substation expansion is provided in IS/MND Figure 4.3 Homestead Substation Rebuild Layout. Final design will determine exact locations and dimensions. The image below in Figure B2-A for SVP's Walsh Substation illustrates the appearance of a concrete masonry unit (CMU) block wall with electrical equipment beyond. Switch gear and control enclosures and transformers are screened by the wall. The exact configuration and positioning of steel structures at the Homestead site will be determined in final design.

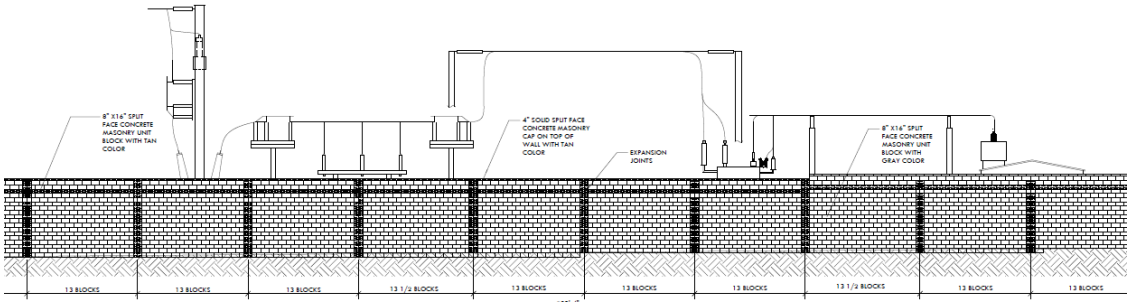


Figure B2-A: Walsh Substation view of concrete block wall with substation beyond.

The photo below (Figure B2-B) shows the existing substation as viewed from the north, with the Homestead Road Apartments in the background. This existing substation transformer and ancillary equipment shown in the figure would be replaced by three transformers with new ancillary equipment. These would be somewhat similar in appearance to the existing unit. Two units would be located to the west (right in the photo) of the existing unit. The third new unit would replace the current unit at its current location. The wood poles to the right in the background and other poles on the south side of the site would be removed and replaced by poles on the north side, farther from the apartments and near where the photo was taken. Overall, the new site configuration would be as shown in IS/MND Figure 4.3. The vegetation in the background of Figure B2-B (between the substation and the apartments) would be replaced by the concrete block wall, which would screen lower elements of the substation from view. Other views of the existing substation from different angles show similar conditions: a largely barren site with the existing enclosure and steel within the site.

Figure B2-B: View of existing substation looking south toward Homestead Road Apartments.

Views of the site from public locations are limited, the proposed wall would visually screen most of the site equipment and structures from view, and the site is already “industrial” in nature; therefore, visual impacts would be less than significant. However, SVP will enter into discussions with the apartment building management regarding the possibility of planting vegetation between the wall and the apartment parking area. Any vegetation would need to be of a type that would not damage the wall directly or by its roots.

B2-3 The commenter believes that the proposed wall will have a profound visual impact and that trees should be used to enhance the aesthetics of the area and the proposed wall.

See Response B2-2. SVP now typically installs concrete block walls around its substation facilities for security/safety and to partially screen views of equipment from offsite. At the property line between the Homestead Substation and the adjacent apartment complex is a chain link fence with vegetation growing intermittently along the fence line. Some vegetation is within SVP's property, and some is on private property. SVP plans to replace the fence with a nominal 13-foot-high wall and to remove the vegetation within the substation property. Vegetation on the apartment property, situated between apartment parking and the fence, would remain. To the extent that it overhangs or interferes with the wall or substation, it may be trimmed in consultation with the apartment complex management. A large oak has grown on the existing chain link fence near the driveway gate. The tree appears to be on both substation and apartment property. SVP will consult with an arborist to determine if the tree can be salvaged and if the wall in this area needs to be set back or modified to accommodate the tree.

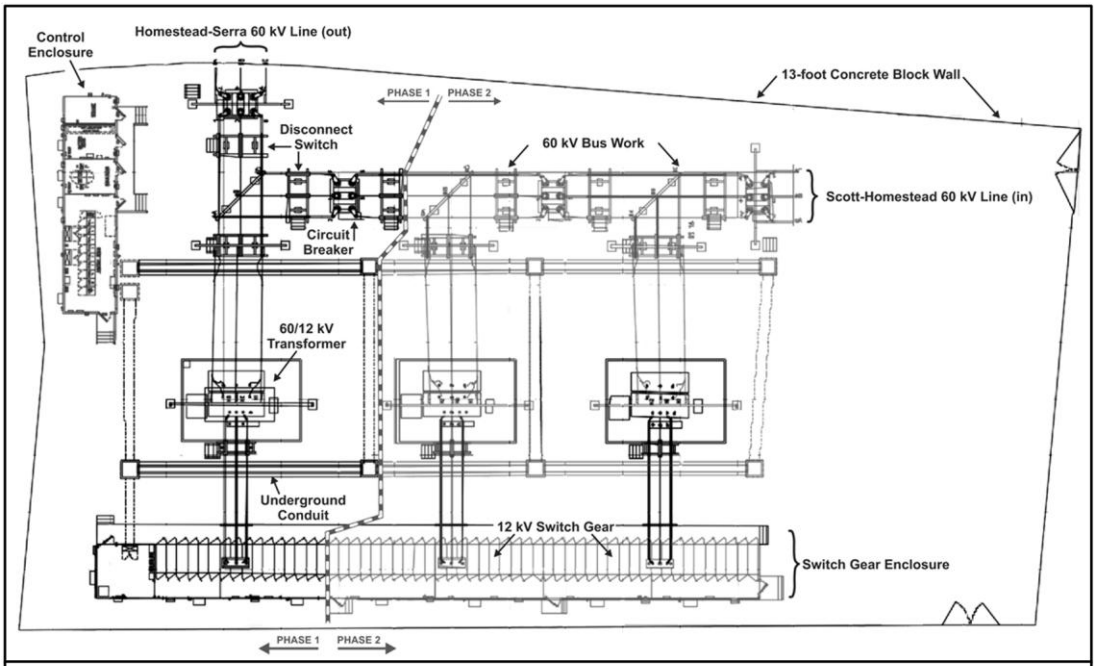
Figure B2-C is a view looking northwest toward the substation from the apartment's rear parking area, showing a portion of the fence line with the substation beyond. The tall wooden pole in this view would be removed as part of the project. The chain link fence would be replaced with a 13-foot-high wall. The tall vegetation in this view is on SVP property and would be removed. The shorter vegetation is on private property.

Figure B2-C: View northwest from apartment complex's rear parking area adjacent to substation site looking northwest, near end of driveway from Homestead Road.

Figure B2-D looking west shows the area between the apartment buildings and the substation property. The tall wood poles in this view would be removed as part of the project. Residents with windows on the second story would have views over the wall.

Figure B2-D: View looking west at apartment complex's rear parking area adjacent to substation site.

Final site plans and layout have not been developed for the Homestead Rebuild project. IS/MND Figure 4.3 Homestead Substation Rebuild Layout (reproduced below) shows the anticipated layout and location of equipment. The existing substation structures are located at approximately the site of what would be the eastern-most of the new transformers. The location of the gate shown in Figure B2-C above is indicated at the lower right of the drawing. The apartment property extends approximately one-third of the distance along the substation property to the left of the gate



Source: Silicon Valley Power

Figure 4.3
Homestead Substation Rebuild Layout

The wall would provide a uniform visual form screening much of the substation's equipment from views at ground level. A few second story apartments have existing views of the substation, as shown in Figure B2-D above, a situation that would remain. The removal of the existing wood poles would improve the view. Structural steel framing that would support the transformers, and lines to them, would be visible above the wall. The new steel structures would be similar in nature to the existing substation visual effect.

B2-4 The commenter notes that the IS/MND identifies the driveway adjacent to the apartment complex as a secondary entrance to the substation site and thinks this is not acceptable.

It is anticipated that the primary construction access to the substation site will be via an existing driveway from Kiely Boulevard on the east side of the site, which is not near the apartment complex. Primary operations access would be via the driveway from Homestead Road, located between the apartment complex and the adjacent City fire station. This driveway is currently used by apartment residents and visitors, vendors, the fire department, and SVP. SVP plans to use the Kiley Blvd driveway for construction access; however, circumstances may occasionally dictate use of the secondary access route from Homestead Road during construction. Use of the secondary access is permitted and such use does not constitute an undue hardship or environmental impact. The existing driveway has some cracking and small potholes. It is anticipated that the driveway will be rebuilt or resurfaced by SVP to accommodate any new or replacement distribution substructures, any drainage changes, and any potential damage from SVP construction activities.

B2-5 The commenter notes that IS/MND page 5.13-4 indicates equipment noise by individual type of equipment. He inquires regard total noise is all equipment is used at the same time.

The rear of the apartment complex is 50 feet from the substation property line with only a few second story windows facing the substation site. Most construction would occur at a greater distance than 50 feet, i.e., within the substation property. The proposed 13-foot-high concrete block wall would be installed around the substation. The sequence of construction is determined by the construction contractor. Concrete masonry unit (CMU) walls are typically installed early in the project schedule, but this varies with the project. The timing of the construction of the wall is as yet unknown. Noise from multiple sources is not additive. The decibel scale used in describing noise levels is logarithmic and results in only slight increases in perceived noise when multiple noise sources are combined. Construction would occur within the times allowed under the City's noise ordinance. Not all equipment listed would be used at the same time, nor would they be used for extended periods. Actual pieces of equipment used would vary depending on the construction stage, e.g., site grading/preparation; equipment/structure delivery; equipment/structure installation; etc. As noted in the IS/MND, the maximum intermittent noise levels from a construction work spread would typically range from 84 to 90 dBA at 50 feet. (This does not consider the attenuating effect of the wall.) After construction, ambient noise levels would not exceed local requirements and would be similar to current noise levels.

B2-6 The commenter suggests that ground vibration during construction may cause damage and that the project should bear the responsibility for monitoring damage and providing reimbursement.

Groundborne vibration attenuates quickly with distance, and the effects would be temporary and localized. Annoyance from vibration may occur when the vibration exceeds the threshold of perception. However, the threshold of perception occurs at a much lower level of ground

displacement than the level that would be likely to lead to structural damage. Most construction-related vibration would not be capable of causing structural damage, with the exception of impact activities such as pile driving. No pile driving would occur with the project. The peak particle velocity (PPV) is defined as the maximum instantaneous peak displacement of a vibration signal in inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. As an example of the potential effect, a vibratory roller may cause approximately 0.21 in/sec PPV at a distance of 25 feet from the source. Adjusting for propagation over additional distance, the level at a receiver 50 feet away would be less than 0.1 in/sec PPV. Vibration at this level would not exceed the criterion of 0.12 in/sec that indicates a potential for damage to the most susceptible types of buildings, based on impact assessment procedures established by the Federal Transit Administration (in Section 7.2 of FTA, 2018).[1]

As noted on page 5-82 of the IS/MND, "The impact from construction-related groundborne vibration would be short-term and confined to only the immediate area around activities (within about 25 feet). Except of wall construction and paving, most work within the substation site would be more than 25 feet from residences." The apartment complex is 50 feet from the substation fence line, with the intervening space mostly paved for parking and a driveway. Construction-related vibration at the apartment complex would not occur at levels that could cause any structural damage. Accordingly, the analysis concludes any adverse effects from groundborne vibration would not lead to a potentially significant impact, and the vibration levels caused by the project would not be excessive.

B2-7 The commenter thinks that a site plan, elevation, set back and landscaping/screening drawings are needed for review of negative impacts.

See Responses B2-2, B2-3, and B2-8. Final engineering will determine final positioning of project elements and their heights.

B2-8 The commenter notes that the 13-foot wall is higher than the apartment's balconies and windows and asks what is the wall's setback from the property line. He thinks that landscaping is required and, absent a landscaping drawing, the magnitude of negative impact is hard to determine.

See Responses B2-2 and B2-3, which address the wall and setback relative to the apartment complex. The proposed wall would be at the property line. At ground level, the rear of the apartment complex provides parking along the existing SVP substation fence and in carports beneath the apartment building's second story (see Figures B2-C and B2-D above). There are only a few windows overlooking the substation, and no balconies. Therefore, few apartments would have views of the wall or substation. The wall would replace an existing chain-link fence and intermittent vegetation (see Response B2-3).

B2-9 The commenter believes that lighting near the gate at the end of the driveway adjacent to the apartment complex needs to be lower than 4 feet. The commenter believes SVP owns the property with a Kiely Blvd commercial building at the east side of substation and there is no

[1] FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment Manual (Report 0123). September. [Online]: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research_-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

need for a tall light post at the gate. He also thinks lights must be below eye level, with motion sensors, less than 40 watts, and pointing away from the apartment building.

SVP owns the driveway from Kiely Blvd to the substation that will be the primary access route to the site during construction. There is a use agreement between the commercial property owner and the City regarding the parking area and driveway, which is located between the commercial buildings and the nearby creek. SVP does not own the property with the commercial building. The commercial building currently has night lighting on the rear of the building that illuminates a part of the substation site as well as the rear of the building. The existing substation has an overhead light on a light pole adjacent to the substation equipment. The public park north of the substation site has extensive night lighting. The parking area at the rear of the apartment building also has night lighting. Overall, the substation and vicinity, being in a highly urbanized area, has extensive lighting for safety.

As part of the substation rebuild, SVP proposes to install photo-cell controlled LED security lighting on the interior the perimeter wall, at gates, and on certain steel structures. Fixtures would be downward focused to minimize light spillage offsite. At each gate, a 2-head fixture is proposed to be installed, with one head illumining the area around the exterior of the gate. SVP is presently evaluating its substation perimeter security lighting methods. LED lighting is different from the existing lighting at Homestead Substation. In the past, SVP has done a lighting simulation for new substation with CMU walls at the perimeter and found that there was very little light spillage outside the walls. SVP may make further adjustments based on changes in lighting technology. SVP will consult with the apartment owner regarding lighting fixtures at the south gate to the site.

B2-10 The commenter thinks that the site plan must preserve existing vegetation and add landscaping to shield new structures.

The site currently supports limited vegetation along the south fence line and in the northwest corner of the site. This vegetation would be removed to accommodate project construction and ensure that vegetation does not interfere with the substation's safe operation. If the City determines there is a need to replace any removed vegetation it would be at locations elsewhere in the City and would be coordinated with the City arborist. Most of the substation components would be less than 13 feet high and shielded from view by the proposed wall. Existing tall wooden poles and their conductors near the apartment complex would be removed and replaced by poles and conductors on the north side of the site, farther from the apartments. Steel structures supporting conductors and other electrical equipment requiring ground clearance would be higher that the wall. (See illustration B2-A in Response B2-2). The substation would not be visible from nearby public locations except on its north side, were the substation abuts Saratoga Creek and is separated from the park by the creek and extensive vegetation located outside of the substation site. The proposed wall will adequately screen the substation from external views. As noted in Responses B2-2 and B2-3, SVP will work with the apartment owners to determine if appropriate vegetation can be installed or retained to further reduce the visibility of the project.

B2-11 The commenter reserves the right to add to his list of comments.

This comment is noted; however, the formal comment period has passed. However, the City anticipates conducting outreach with adjacent property owners during the design phase to explore potential issues and concerns with the intention of reaching mutually agreeable understandings.

B2-12 The commenter notes that some transmission lines passing out of the substation property are near the apartment building and believes this is a fire hazard and the lines should be moved farther away.

The line in question is a 12 kV distribution line and is not part of the Homestead Substation Rebuild. Whether to move the line is a separate matter between SVP and the apartment owners and is not part of the proposed project. SVP and the apartment owners may separately discuss changing the routing of the line.

B2-13 The commenter request that the City put in a new driveway after construction and thinks that the existing driveway has been damaged by expansion of the adjacent fire station and by ingress and egress at the substation.

SVP intends to use the Kiely Blvd driveway as its primary access but may use the Homestead Road access driveway on an as needed basis. Past construction activity at the fire station on Homestead Road is unrelated to the current proposed substation project. SVP periodically accesses the substation site using the Homestead driveway, which is a permitted right. It is assumed that the most frequent use of the driveway is by residents and delivery and service trucks and vehicles/vans coming to the apartment complex. The proportion of wear and tear on the driveway attributable to various users is unknown. There is reportedly some cracking of the driveway surface near the gate to the substation. As noted in Response B2-4, it is anticipated that the driveway will be rebuilt or resurfaced by SVP to accommodate any new or replacement distribution substructures, any drainage changes, and any potential damage from SVP construction activities.

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) will be used by the City of Santa Clara and SVP to ensure that the mitigation measures adopted as a condition of project approval are implemented. The MMRP is consistent with CEQA Guidelines (Sections 15074(d), 15091(d), and 15097) for the implementation of mitigation.

SVP will be responsible for monitoring the implementation of the mitigation measures presented in Table 1. SVP will designate specific personnel to implement and document all aspects of the MMRP. SVP will ensure that the designated personnel have authority to enforce mitigation requirements and will be capable of terminating project construction activities found to be inconsistent with mitigation objectives. Additionally, SVP will be responsible for ensuring that construction personnel understand their responsibility to adhere to the MMRP requirements and other contractual requirements related to the implementation of mitigation.

Table 1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
Air Quality			
Construction-Phase Air Quality	**MM AQ-1.** Implement Basic Construction Air Quality Mitigation The project shall ensure that basic construction emissions control measures are implemented as "Best Management Practices," as follows: ▪ All exposed soil surfaces (e.g., parking areas, staging areas, soil piles, and graded areas) 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 areas to be paved shall be completed as soon as possible. Foundation pads shall be laid as soon as possible after grading. ▪ 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 air-borne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage regarding idling 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 SVP regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	Emissions from construction equipment exhaust are reduced	During construction
Biological Resources			
Nesting Birds	**MM BIO-1.** Biological Monitoring. A qualified biologist will be assigned to the project and will monitor the project periodically. The qualified biologist will be the point of contact for any employee or contractor who might inadvertently kill or injure a special-status species or anyone who finds a dead, injured, or entrapped individual. The qualified biologist or biological monitor shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources.	Monitor implementation of specified biological monitor activities	Prior to and during construction

Table 1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
Nesting Birds	**MM BIO-2.** Worker Environmental Awareness Training. Prior to construction, a construction employee education program will be conducted in reference to all sensitive environmental resources potentially affected by site work (e.g., air quality, biological resources, cultural resources, hydrology and water quality, hazardous materials) and the measures associated with their protection (i.e., mitigation measures and applicable laws and regulations).	Review and attend construction employee education program and monitor training implementation	Prior to construction
Nesting Birds	**MM BIO-3.** Preconstruction Nesting Bird Surveys and Nest Protection. A preconstruction nesting bird surveys shall be conducted of the site and vicinity by a qualified biologist no more than 7 days before any work activities are performed during the nesting season (February 1 to August 31). A Preconstruction nesting bird survey also shall be required prior to any vegetation removal or trimming that occurs during the nesting season. Surveyors will search for all potential nest types (e.g., ground, cavity, shrub/tree, structural, etc.) and determine whether the nest is active. A nest will be determined to be active if eggs or young are present in the nest. Upon discovery of active nests, Silicon Valley Power's biological monitor will determine if there is need for a buffer or shield to minimize disturbance of the nest. Upon this determination and execution of any required minimization action, work may proceed. The extent of mitigation will be based upon: acclimation of the species or individual to disturbance, nest type (cavity, tree, ground, etc.), and level and duration of construction activity. If there is a period of 7 or more days during nesting season in which construction does not occur, a new survey shall be undertaken to determine if any nests have been established. In the unlikely event a special-status or listed species is found nesting nearby, CDFW and USFWS will be notified and the City of Santa Clara will be provided with nest survey results, if requested. When active nests are identified, monitoring for significant disturbance to the birds will be implemented.	Ensure preconstruction bird nesting surveys are conducted and monitor for significant disturbance to birds if nests are identified	No more than 7 days before planned construction work
Cultural Resources			
Unanticipated Discoveries of Historical Resources or Unique Archaeological Resources	**MM CR-1.** Worker Training and Management of Unanticipated Discoveries of Historical Resources, Unique Archaeological Resources. SVP shall conduct a worker environmental awareness program (WEAP) for project personnel who, during the course of project work, might encounter or alter historical resources or important/unique archaeological materials. This program may be combined with any similar required program, such as for biological resources. The WEAP may include a kickoff tailgate session that describes how to identify cultural resources and what to do if an unanticipated discovery is made during construction, presents site avoidance requirements and procedures to be followed if unanticipated cultural resources are discovered during project construction, and includes a discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and SVP policies. If previously unidentified cultural resources are identified during construction, construction work within 100 feet of the find shall be halted and directed away from the discovery until a Secretary of the Interior qualified archaeologist assesses the significance of the resource. The archaeologist, in consultation with the City of Santa Clara, State Historic Preservation Officer, any interested Tribes, and any other responsible public agency, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are found to be eligible to the National or California Registers, qualify as a unique archaeological resource under California Environmental Quality Act Section 21083.2, or are determined to be tribal cultural resource as defined in Section 21074.	Review and attend worker environmental awareness program; Monitor implementation of unanticipated discovery protocols	Prior to construction and during construction

Table 1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
Unanticipated Discoveries of Human Remains	**MM CR-2.** Treatment of Human Remains. Any human remains discovered are to be treated with respect and dignity. Upon discovery of human remains, all work within 50 feet of the discovery area must cease immediately, nothing is to be disturbed, and the area must be secured. The Santa Clara County Coroner's Office must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner of the site is to be called and informed of the discovery. If the remains are located on federal lands, federal land managers, federal law enforcement, and the federal archaeologist must be informed as well, due to complementary jurisdiction issues. It is very important that the suspected remains, and the area around them, are undisturbed and the proper authorities called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are archaeological/ historic or of modern origin and if there are any criminal or jurisdictional questions. After the Coroner has determined the remains are archaeological/historic-era, the Coroner will make recommendations concerning the treatment and disposition of the remains to the person responsible for the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American, he/she shall contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48 hours to make recommendations to the landowner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC. According to the California Health and Safety Code, six (6) or more human burials at one (1) location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052).	Monitor implementation of human remain discovery protocols	During construction
Geology and Soils			
Seismically-Induced Liquefaction	**MM G-1.** Conduct Geotechnical Investigations for Liquefaction. Because seismically induced liquefaction-related ground failure has the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for liquefaction to affect the new project poles and substation components at the project site. Where liquefaction hazards are found to exist/verified, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate liquefaction-related impacts could include bigger foundations, installation of flexible bus connections, and/or incorporation of slack in cables to allow ground deformations without damage to structures.	Ensure a design-level geotechnical investigation is performed	At least 60 days before final Project design
Expansive Soils	**MM G-2.** Conduct Geotechnical Investigations for Expansive Soils**.** Because expansive soils have the potential to damage or destroy project components, the design-level geotechnical investigations to be performed by SVP shall include investigations designed to assess the potential for expansive soils to affect the new project components at the project site. Where expansive soils are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by the project engineer. Design measures that would mitigate impacts from expansive soil could include over-excavation and replacement with engineered fill or soil improvements.	Ensure a design-level geotechnical investigation is performed	At least 60 days before final Project design

Table 1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
Unanticipated Discoveries of Paleontological Resources	**MM G-3.** Worker Training and Management of Unanticipated Discoveries of Paleontological Resources. In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing or other construction activities, a paleontologist must be retained who meets the professional paleontologist qualifications (Society of Vertebrate Paleontology's Standard Procedures, 2010) and has demonstrated experience in carrying paleontological projects to completion. This qualified paleontologist must develop and implement a Paleontological Resources Management Plan (PRMP) for the project area that meets the standards set forth by the Society of Vertebrate Paleontology (2010). This shall include: ▪ A Worker Environmental Awareness Program (WEAP) wherein all construction personnel are trained on the processes to be followed upon encountering any fossils. ▪ A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. Monitors shall be onsite for any disturbance of sediments with high or unknown paleontological sensitivity. Monitors must have demonstrated sufficient paleontological training and field experience to have acceptable knowledge and experience of fossil identification, salvage and collection methods, paleontological techniques, and stratigraphy. ▪ A recovery plan for significant fossils that provides for the treatment of specimens to the point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. ▪ A specimen identification, analysis, and curation plan that includes identification to the lowest taxonomic level possible; taxonomic, taphonomic, and biostratigraphic analysis; and curation to the standards of the repository where they will be curated.	Review Paleontological Resource Monitoring Program; Monitor implementation of Program	Prior to construction and during construction
Hazards and Hazardous Materials			
Hazardous Substances Control	**MM HM-1.** Hazardous Substance Control and Emergency Response. SVP shall implement its hazardous substance control and emergency response. procedures as needed. These procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on site. If it is necessary to store chemicals on site, they shall be managed in accordance with all applicable regulations. Material safety data sheets shall be maintained and kept available on site, as applicable. No known soil contamination was identified within the project area. In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested and, if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or	Collect and analyze soil samples and, if contamination is discovered, ensure that construction activities are conducted according to SVP's hazardous substance control and emergency response procedures	Prior to construction and during construction

Table 1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations. All hazardous materials and hazardous wastes shall be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following: ▪ Proper disposal of potentially contaminated soils. ▪ Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources. ▪ Emergency response and reporting procedures to address hazardous material spills. ▪ Stopping work at that location and contacting the City Fire Department Hazardous Materials Division immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Division. SVP shall complete its Emergency Action Plan Form as part of project tailboard meetings. The purpose of the form is to gather emergency contact numbers, identify first aid locations and provide other tailboard safety information.		
Hydrology and Water Quality			
Water Quality	**MM HYD-1.** SWPPP or Erosion Control Plan Development and Implementation. Following project approval, SVP will prepare and implement a SWPPP, if required by State law, or erosion control plan to minimize construction impacts on surface water and groundwater quality. Implementation of the SWPPP or erosion control plan will help stabilize graded areas and reduce erosion and sedimentation. The plan will designate BMPs that will be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, covers, and silt fences, will be installed before the onset of winter rains or any anticipated storm events. Suitable stabilization measures will be used to protect exposed areas during construction activities, as necessary. During construction activities, measures will be in place to prevent contaminant discharge. The project SWPPP or erosion control plan will include erosion control and sediment transport BMPs to be used during construction. BMPs, where applicable, will be designed by using specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as properly containing stockpiled soils. Erosion control measures identified will be installed in an area before construction begins during the wet season and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, will remain in place until disturbed areas have stabilized. The plan will be updated during construction as required by the SWRCB. A worker education program shall be established for all field personnel prior to initiating fieldwork to provide training in the appropriate application and construction of erosion and sediment control measures contained in the SWPPP. This education program will also discuss appropriate hazardous materials	Ensure a SWPPP is prepared and implemented, or if a SWPPP is not required, ensure that an erosion control plan is developed and implemented to minimize construction impacts on surface water and groundwater quality	Prior to and during construction

Table 1. Mitigation Monitoring Plan

Impact Category	Mitigation Measure	Monitoring Requirement	Timing of Action
	management and spill response. Compliance with these requirements will be ensured by the on-site construction contractor.		
Traffic/Transportation			
Traffic Control	**MM T-1.** Construction Traffic Control Plan. Prior to the start of construction, Silicon Valley Power (SVP) shall prepare and submit a Construction Traffic Control Plan for review and approval to the City of Santa Clara (City) Planning Department for public roads and transportation facilities that would be directly affected by the construction activities and/or would require permits and approvals. SVP shall submit the Construction Traffic Control Plan to the City prior to conducting activities covered in the traffic control permits. The Construction Traffic Control Plan shall include, but not be limited to: ▪ Identification of any routes that would require lane closures or detours to accommodate material and equipment deliveries and methods to ensure safety. ▪ Avoidance of peak travel hours (8:00 10:00 a.m. and 4:00 6:00 p.m.) to the maximum extent feasible. ▪ Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by SVP of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles. ▪ Plans to coordinate in advance with property owners, if any, that may have limited access to properties.	Ensure that a Construction Traffic Control Plan is submitted by SVP and approved by the City of Santa Clara	Prior to construction
Tribal Cultural Resources			
Unanticipated Tribal Cultural Resources	**MM TRC-1.** Management of Unanticipated Tribal Cultural Resources. During project-level construction, should subsurface tribal cultural resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist and an authorized tribal representative shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5 and Section 21074. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to tribal cultural resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in the tribal cultural resource.	Confirm that all activity in the vicinity of a found subsurface tribal cultural resource is ceased and that an authorized tribal representative is contacted	During construction