DRAFT

MITIGATED NEGATIVE DECLARATION AND SUPPORTING INITIAL STUDY

Kifer Receiving Station BESS Project

April 2023

Example of a typical Battery Energy Storage System

Lead Agency

Project Sponsor

Technical Assistance

City of Santa Clara
The Center of What's Possible

NOTICE

NOTICE OF AVAILABILITY
for Public Review of a
Mitigated Negative Declaration
Distribution Date: April 27, 2023

As authorized by the City of Santa Clara as a Lead Agency, the City hereby provides a minimum **20-day public review** period for a **Mitigated Negative Declaration** prepared pursuant to the California Environmental Quality Act (CEQA) for the following project:

Project title:	Kifer Receiving Station Battery Energy Storage System Project
Location:	At 3025 Raymond Street, in the City of Santa Clara, APN: 224-08-085. The project site is approximately 1.2 acres, located at 37°22'33"N, -121°57'07"W on Mount Diablo Meridian, T. 6 S., R. 1 W, Sec. 27 SE1/4SE1/4.
Applicant:	Silicon Valley Power
Owner:	City of Santa Clara
Request:	Adoption of a Draft Mitigated Negative Declaration for the construction and operation of a BESS; request for comments on draft document

INITIAL STUDY DETERMINATION

An Initial Study was completed by Aspen Environmental Group on behalf of Silicon Valley Power, in accordance with the California Environmental Quality Act (CEQA), and is available for review in the Planning Division office in City Hall at 1500 Warburton Avenue, the Mission Branch Library at 1098 Lexington Street, and online at : https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/environmental-review-ceqa/-alpha-K. Based upon the Initial Study, insofar as the project involves building the Kifer Receiving Station Battery Energy Storage Project, with 50 MW of capacity, to provide local area capacity for electrical system reliability and flexibility, the *project will not have a significant effect on the environment* because mitigation measures have been incorporated into/added to the project by conditions of approval that will reduce potential impacts to a less than significant level.

COMMENTS

Comments may be filed with the City in response to the preparation of this Mitigated Negative Declaration, within the review period ***beginning Thursday, April 27, 2023 and ending at 5:00 PM on Wednesday, May 17, 2023***, pursuant to Section 15073 of the CEQA Guidelines. Responses received in writing on or before the date of review or verbally at the time of the review of this project will be considered along with the proposed Mitigated Negative Declaration.

Lead Agency: Silicon Valley Power
Contact: Sachin Bajracharya, Project Manager
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Email: sbajracharya@santaclaraca.gov
Phone: (408) 615-6617

John Davidson

Date: April 26, 2023

John Davidson, Principal Planner for
Andrew Crabtree
Director of Community Development, City of Santa Clara

DRAFT

MITIGATED NEGATIVE DECLARATION AND SUPPORTING INITIAL STUDY

FOR

SILICON VALLEY POWER'S KIFER RECEIVING STATION BESS 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

APRIL 2023

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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
BESS	Battery Energy Storage System
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
NESHAP	National Emission Standards for Hazardous Air Pollutants
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

DRAFT

Mitigated Negative Declaration/Initial Study

for

Silicon Valley Power's Kifer Receiving Station Battery Energy Storage System (BESS) Project

1. MITIGATED NEGATIVE DECLARATION

1.1. Project Information

Project:	Kifer Receiving Station Battery Energy Storage System 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:	Low Intensity Office/R&D (Research and Development)
Zoning:	ML – Light Industrial

1.2. Introduction

Silicon Valley Power (SVP) is proposing the Kifer Receiving Station (KRS) Battery Energy Storage System (BESS) Project (Project or proposed Project), which would construct a BESS adjacent to the existing Kifer Receiving Station. 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 have constructed a 50-megawatt (MW) battery energy storage system (BESS) adjacent to the existing SVP Kifer Receiving Station (KRS) to increase SVP system reliability. The new BESS would occupy approximately 24,000 square feet within a larger parcel owned by the City of Santa Clara that is adjacent to the existing KRS. SVP is currently planning to contract with Ameresco to install and own the battery energy storage system. The 60 kV Space Park Junction substation to be owned and maintained by SVP will be constructed on the Project property to interconnect with the BESS. An existing structure on the property where the BESS will be located will be demolished under a ministerial permit from the City of Santa Clara as part of the Project.

1.4. Environmental Determination

The Initial Study was prepared to identify the potential environmental effects resulting from the 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 SVP's 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.

1.4.1. 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.

1.4.2. 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 animal. 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 survey 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 shall also 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.

1.4.3. 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.

1.4.4. 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 of the site is to be called and informed of the discovery. 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.

1.4.5. Mitigation Measure for Geologic and Seismic Hazards

MM G-1 **Conduct Geotechnical Investigations.** Because seismically induced liquefaction-related ground failure has the potential to damage or destroy Project components, design-level geotechnical investigation for the Project shall be performed by SVP and shall include

investigations designed to assess the potential for geologic and seismic hazards, and specifically include evaluation of potential for liquefaction and expansive soils to affect the BESS system components and the 60 kV line at the Project site. Where liquefaction or expansive soils 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. Finalized Project design incorporating geotechnical recommendations shall be submitted to the City 60 days prior to Project construction.

1.4.6. Mitigation Measure for Paleontological Resources

MM G-2 **Worker Training and Management of Paleontological Resources.** 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. The qualified professional paleontologist shall prepare a Paleontological worker environmental awareness program (WEAP), and training shall be provided for all staff who will be onsite during excavations. This program may be combined with any similar required program, such as for biological resources. The WEAP shall show what local Pleistocene fossils look like in general, where they may appear in the Project, and how to proceed should material suspected to be a fossil is encountered.

The 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 PRMP shall include:

- A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. The Paleontologist shall determine a suitable monitoring schedule based on construction activities and anticipated depth of ground disturbance. 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.

1.4.7. Mitigation Measure for 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, however historic groundwater contamination has occurred at the site and at upgradient sites (SWRCB, 2023b though f). In the event that soils, or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed/encountered during site grading or excavation activities or dewatering activities, the excavated soil and/or extracted groundwater shall be tested and, if contaminated above hazardous waste levels, shall be contained and either treated or disposed of at a licensed waste facility. The presence of known or suspected contaminated soil or groundwater 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.

MM HM-2 **Asbestos and Lead Based Paint Testing and Removal.** The Project would implement the following measures to reduce impacts due to the presence of unknown asbestos containing materials (ACMs) and/or lead based paint (LBP) in the structure to be demolished:

- In conformance with State and local laws, a visual inspection/predemolition survey, and sampling and testing, shall be conducted prior to the demolition of the on-site building to determine the presence of asbestos-containing materials and/or lead-based paint, and to determine appropriate handling and disposal requirements.
- Prior to demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations (CCR) 1523.1. Employee training, employee air monitoring, and dust control shall be conducted during demolition also in accordance with this Standard. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed.
- All potentially friable ACMs shall be removed in accordance with NESHAP guidelines prior to any building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos.

- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.

1.4.8. 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 Storm Water Pollution Prevention Plan (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.

1.4.9. Mitigation Measure for Transportation Impacts

MM T-1 **Construction Traffic Control Plan.** Prior to the start of construction, the Project owner 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. The Construction Traffic Control Plan shall be submitted to the City for review and approval 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 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.

1.4.10. 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 (MMRP) has been prepared to ensure that mitigation measures are properly implemented (see Section 6). The MMRP 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.

Sachin B. 04/26/2023

Sachin Bajracharya, Project Manager
Silicon Valley Power

Date

3. INTRODUCTION TO THE INITIAL STUDY

3.1. Proposed Project Overview

Silicon Valley Power (SVP) is proposing to construct a BESS adjacent to the existing Kifer Receiving Station (KRS) to increase reliability. 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 or the Project developer 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

Kifer Receiving Station Battery Energy Storage System Project (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

Sachin Bajracharya, Project Manager
Principal Electric Utility Engineer
Phone: (408) 568-1080
E-mail: sbajracharya@santaclaraca.gov

4.4. Project Location

The Kifer Receiving Station BESS site is on a portion of County Assessor's parcel number (APN) 224-08-085. The property is at 3025 Raymond Street, Santa Clara, California 95054. The property is located west of the Kifer Receiving Station and is accessed from Raymond Street on the west side of the property. The Proposed Project would occupy the northern 1.20 acres of the parcel; the southern 1.37 acres would not be affected by the KRS BESS Project.

4.5. Project Sponsor's Name and Address

City of Santa Clara, Silicon Valley Power
881 Martin Avenue
Santa Clara, California 95050

4.6. General Plan Designation

The City of Santa Clara General Plan designates the Project site as Low Intensity Office/R&D. All adjacent parcels to the north, south, and west have the same General Plan Designation. The parcel to the east of the Project, where the Kifer Receiving Station is located, has a general plan designation of Light Industrial.

4.7. Zoning

The Project site's zoning is ML – Light Industrial. All adjacent parcels to the north, south, and west have the same zoning. The parcel to the east of the Project where the Kifer Receiving Station is located is zoned B – Public or Quasi Public.

4.8. Surrounding Land Uses and Setting

The site is surrounded by light industrial uses, including office buildings and utilities. There is one road adjacent to the Project site, Raymond Street. Raymond Street is a two-lane surface street with a speed limit of 25 mph and on street parking on both sides.

4.9. Other Public Agencies Whose Approval is Required

The Applicant may be required to obtain the permits from agencies listed in Table 4-3, Permits and Approvals Necessary for the proposed Project (see Section 4.10.7).

4.10. Description of the Project

4.10.1. Overview

The proposed Kifer Receiving Station Battery Energy Storage System (BESS) Project would be built and operated by Ameresco to provide Silicon Valley Power additional local area capacity for electrical system reliability and flexibility. The BESS would have a rated power capacity of up to 50 MW with a four-hour duration. The energy capacity is up to 200 megawatt-hours (MWh). A BESS allows surplus renewable electricity to be acquired at a low cost and released when demand and prices are higher. Batteries can also balance generation and consumption, thus reducing congestion, and can help to control voltage and frequency. By building and using the proposed Project, a clean, reliable resource would be gained to help integrate renewables, reduce dependence on gas-fired generation, and reduce GHG and criteria air pollutant emissions.

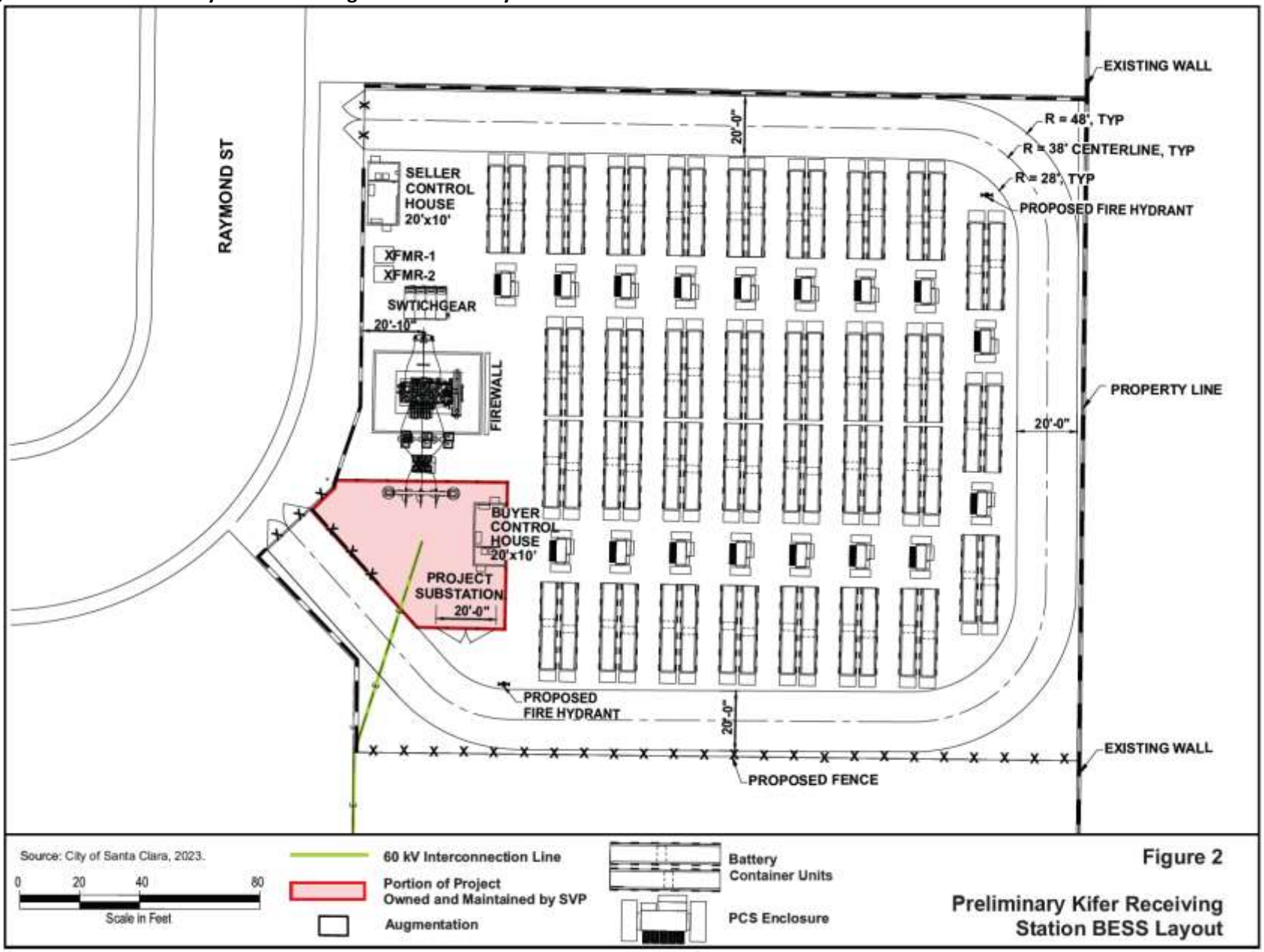
The approximately 1.2-acre Project site is located adjacent to the Kifer Receiving Station (KRS). The BESS will be interconnected to SVP's Kenneth (KEN) Substation, via a 60 kV interconnection to the existing KEN-OKJ 60 kV line that extends between Kenneth Substation and Oaks Junction (OKJ) Substation. The Kenneth Substation is a 12 kV general distribution substation. The Oaks Junction Substation is a 60 kV substation dedicated to a single data center customer. The 60 kV line would come from the southwest corner of the BESS parcel and run south to interconnect to the existing 60 kV line. The line between Kenneth Substation and Oaks Junction Substation would be tapped and the terminal 60 kV line would be established at the southern end of the parcel for this Project. An easement may need to be secured for this line and will be determined during the design process. See Figure 1, Kifer Receiving Station BESS Location. SVP plans to enter into an energy storage tolling agreement with Ameresco. Ameresco will develop, own, and operate the BESS, with SVP supplying the charging energy. The energy in the BESS will belong to SVP. Charging and dispatch operations will be controlled by SVP through the 60 kV substation on the property.

The Project site currently has a building located on it which would be demolished by Ameresco under a ministerial permit from the City of Santa Clara as part of the Project. This building is older than 50 years, therefore a historic building evaluation is required prior to demolition. The historic building evaluation was completed in February 2023, and it was determined that the existing structures on the site did not meet State or Federal criteria for listing on national, state, or local historic registers, meaning it does not qualify as an historical resource under CEQA.

It is anticipated that construction would begin in December 2023 and take approximately 16 months to complete. The Project site is City-owned property and would be leased to Ameresco. SVP would occupy approximately 0.10 acres of the site for 60 kV Space Park Junction substation, which will include a 60 kV switchyard and a buyer's control house, which would be approximately 15 feet by 30 feet by 10 feet. The switchyard and control house would be surrounded by a chain link fence. See Figure 2, Preliminary Kifer Receiving Station BESS Layout.

Figure 1. Kifer Receiving Station BESS Location

Figure 2. Preliminary Kifer Receiving Station BESS Layout



4.10.2. Project Objectives

The objectives of the KRS BESS Project are to:

- Improve energy reliability for the City of Santa Clara
- Increase the reliability and flexibility of SVPs electrical grid by storing energy
- Help to solve California's "duck curve" power production problem by installing battery energy storage capacity that can be called upon in periods of peak demand

4.10.3. Project Components

The Project involves two major components: the BESS system and a 60 kV line to interconnect to SVP's grid.

4.10.3.1. Battery Energy Storage System

The proposed BESS facility would use advanced technology batteries and control systems. Construction would require removal of an existing building on-site and removal of trees prior to construction.

Subject to final engineering, the BESS would consist of multiple battery container units that are up to nine feet in height, up to 30 feet long, and up to eight feet wide. Initially, the Project will have up to 64 battery container units. The BESS will also have approximately 16 Power Conversion System (PCS) enclosures. To maintain the capacity of the system, smaller modular battery containers will be added to the site in future years. See Figure 2, Preliminary Kifer Receiving Station BESS Layout.

The battery container units will be separated from each other by at least 8 feet and setback more than 30 feet from off-site properties. Power lines between the PCS units will be underground, but the lines from step up transformers to the SVP junction will be overhead.

The BESS includes the following major equipment and systems:

- Battery container units include battery cells/modules, an HVAC system, a battery management system, and fire suppression equipment;
- The Power Conversion System (PCS) enclosures include an AC/DC inverter, transformer, and controls;
- Balance of Plant equipment, which includes a control house with medium voltage (MV) and low voltage electrical systems, fire suppression, HVAC systems, network/Supervisory Control and Data Acquisition (SCADA) systems, power distribution panel boards, and auxiliary power transformers; and
- High Voltage (HV) equipment, including a step-up transformer, HV circuit breaker, HV current transformers and voltage transformers, a packaged control enclosure for the HV breaker and transformer equipment, HV towers, structures, and HV cabling.

4.10.3.2. 60 kV Line Interconnection

The Proposed Project would include construction of an overhead 60 kV line constructed by SVP to interconnect the BESS to SVP's grid. The SVP-owned line would be approximately 300 feet long and supported on 2 light-weight steel monopoles approximately 60 feet tall. Depending on final engineering, SVP will secure an easement from the adjacent property for the interconnection line, if required.

The 60 kV line would interconnect the new Space Park Junction Substation on the Project property to the existing KEN-OKJ 60 kV line, between Kenneth (KEN) Substation and Oaks Junction (OKJ) Substation. This interconnection will be used to receive and deliver energy. Protection and control panel upgrade or configuration also will be required at SVP's Kenneth and Oaks Junction Substations.

4.10.4. Project Construction Activities

4.10.4.1. Staging Area

The Project site is planned to be used as the primary staging area for construction equipment, new materials, and parts for the Project. If additional staging areas or storage space is necessary, Ameresco will rent temporary space near the Project site. Some equipment and materials may be temporarily stored at existing SVP yards prior to delivery to the BESS site. One example of a potential staging area would be SVP's storage yard located at 1715 Martin Avenue, Santa Clara, CA, which is approximately 1 mile from the Project site. The KRS BESS 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 Raymond Street by way of the existing driveway. After project completion, all temporary facilities, debris, and old equipment would be removed. As described below, work would occur in phases, with demolition of the existing building occurring before construction activities.

4.10.4.2. Site Work

Site Preparation

Phase 1: Ameresco would obtain a Demolition Permit from the City to demolish the existing building prior to the start of BESS construction.

Phase 2: Site preparation would include all required earthwork and subsurface work. All work activities would take place within the proposed Project area. Installation of temporary fencing to secure the Project area during construction will be installed. Existing vegetation, including trees, within the property would be removed. Overhanging trees outside the property may be trimmed or removed as necessary to ensure safe operation of the BESS facility. Ameresco would consult with the City arborist regarding tree work.

The area would be graded to ensure proper drainage, and grading would occur in coordination with adjacent Kifer Receiving Station projects. If hazardous materials are encountered during building demolition or Project earthwork, the material will be handled consistent with the requirements of State and Federal regulations regarding treatment or disposal and remediation of hazardous materials. Clean fill material may be required to achieve the planned final grade. Soil compaction of the site would be implemented per engineering recommendations.

Construction

Phase 3: Equipment pads and foundations would be installed to support all major equipment. Once foundations are installed, the prefabricated BESS and PCS enclosures and all major equipment would be set in place. Below ground conduit runs for all system required cabling would be installed throughout the BESS yard.

Once all equipment is installed a finished grade for the BESS yard along with an access road around the BESS yard would be installed per SVP standards. A permanent chain link fence would be installed on the south and east sides of the Project site and a concrete masonry unit (CMU) wall would be installed on the north and west sides of the site.

SVP would construct the 60 kV line interconnection during Phase 3 of construction.

4.10.4.3. Site Access, Security, and Lighting

Security would consist of a combination of a 10-foot-high chain link fence and CMU block wall. Two controlled gates would access the site from Raymond Street. The gates would be either swinging or sliding gates, with a minimum width of 20 feet. This access would be keyed, and a KNOX box[1] installed to allow only authorized access.

Additional site security measures may include a monitoring camera system designed to cover the entire facility. This system would be remotely monitored, and security breaches would be reported to emergency responders as well as site operators. An intrusion detection system may be installed along perimeter of the fence to alter monitors of breaches. A camera system working in conjunction with the fence intrusion system would decrease the number of false alarms. The Project would comply with North American Energy Reliability Corporation (NERC) and Western Electricity Coordination Council (WECC) requirements for regulatory control and security systems.

Low-level lighting would be installed at the gates and at strategic locations around the facility. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. The lighting would conform to National Electric Safety Code (NESC) requirements and all applicable City of Santa Clara outdoor lighting standards.

4.10.4.4. Water Use

Water use during construction would be for dust control, concrete cleaning, and basic housekeeping purposes. Adjacent buildings, walls, and trees shelter the site from strong winds. However, ground disturbance could raise dust. This would be controlled by watering. The quantity of water needed would be nominal and would be supplied from existing hydrants and/or trucked to the site. During BESS operation, little water use would be required.

The Project includes installation of two fire hydrants on the site (See Figure 2, Preliminary Kifer Receiving Station BESS Layout). These fire hydrants are for additional fire suppression beyond what is integral to the BESS enclosures, to prevent from the spread of a fire to surrounding properties.

4.10.4.5. Construction Workforce and Equipment

The size of the daily workforce would vary depending on the construction activities occurring on any particular day. Workers would 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 would be used during all construction phases or activities. 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.

[1] A Knox Box is a small, wall-mounted safe that holds building keys for fire departments, emergency medical services, and sometimes police to retrieve in emergency situations. Local fire departments can hold master keys to all boxes in their response area so that they can quickly enter a facility without having to force entry or find individual keys held in deposit at the station.

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
BESS Installation	10-15	5 semi-trucks with trailers 1 crane
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
Light-Duty Steel Pole Installation (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 (up to 2 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

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 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 concrete masonry unit (CMU) walls
Reel trailers with reel stands (semi-trailer or truck mounted type)	Haul conductor
Office trailers	Supervision and Project meeting activities

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

Equipment	Use
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)	Deliver major equipment (BESS and substation) and 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
Welder	For any welding that may be required
Worker lift (truck mounted)	Lift workers to perform work on structures

4.10.4.6. Construction Traffic and Circulation

Site access for crews, materials, and equipment would be from Raymond Street via the existing driveways. The driveways are each approximately 25 feet wide. No materials, equipment, or vehicles would be staged in the driveways. Temporary short-term lane closures on some public roads may be required during the 16-month construction period to accommodate delivery of oversized equipment or materials.

4.10.4.7. Vegetation Clearance

There are approximately 11 trees currently on the site, within a planter surrounded by pavement in the parking lot. There is also scattered vegetation surrounding an existing building on the site. All the trees and vegetation would be removed as part of the Project. Tree trimming for trees located on adjacent parcels may be required. SVP would consult with the City Arborist to determine the proper time to remove the trees, outside of nesting bird season, and whether replacement trees would be required to be planted elsewhere in the City.

4.10.4.8. Erosion and Sediment Control and Pollution Prevention

A small, temporary stockpile of excavated dirt for foundations may be located onsite. There may be two foundations required. The stockpile would either be spread on the site or transported offsite. Sediment controls would be implemented to prevent water or wind disturbance and migration of the soil.

4.10.4.9. Cleanup and Post Construction Restoration

Construction debris, waste, and old equipment would be reused, recycled, or disposed of in accordance with all laws and regulations regarding the disposal of construction debris.

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.

4.10.4.10. Construction Schedule

Construction is expected to take approximately 16 months and is anticipated to be complete by the end of July 2025. Construction would start with mobilizing construction equipment, crews, and materials to

the Project site. In general, after demolition and vegetation removal, 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 all major equipment, including battery and PCS enclosures, HV circuit breakers, dead end structures, control houses, and auxiliary transformers.

SVP would install the interconnection line between the BESS site and the SVP grid. The KEN-OKJ 60 kV would be deenergized to interconnect the BESS, but no customer outages are expected. When construction is essentially complete, the site would be paved with an aggregate base. Various types of construction activity may occur simultaneously within the site. It is anticipated that to the extent feasible, construction activities 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, with no work performed on Sundays.

4.10.5. Operation and Maintenance

Once the KRS BESS is energized and interconnected, the project would be unmanned. Ameresco's existing operations and maintenance division would assume inspection, patrol, and maintenance duties. At least two staff from Ameresco's operations and maintenance division would be assigned to the Kifer BESS Project, who will perform preventative maintenance. The 60 kV interconnection and the portion of the site supporting the 60 kV substation owned and maintained by SVP would be incorporated into SVP's existing maintenance programs. The operation and maintenance activities at the BESS would be similar to SVP's existing activities.

4.10.6. Fire Safety

4.10.6.1. Fire Safety During Construction

Fire protection provided during construction would limit risk of personnel injury, property loss, and potential disruption to the adjacent Kifer Receiving Station.

Fire extinguishers and other portable fire-fighting equipment would be available onsite and at KRS. These fire extinguishers would be maintained in accordance with local and federal Occupational Safety and Health Administration (OSHA) requirements. Locations of portable fire extinguishers would include, but not be limited to, office spaces, hot work areas, flammable storage areas, and mobile equipment such as work trucks and other vehicles. Fire-fighting equipment would be marked conspicuously and be accessible. Portable equipment would be routinely inspected, as required by local and federal laws, ordinances, regulations, and standards, and replaced immediately if defective or needing charge. Fire protection would include minimizing flammable materials in the BESS yard, such as vegetation.

4.10.6.2. Fire Safety During BESS Operations

The BESS would comply with the current California Fire Code (CFC), which governs requirements to minimize the risk of fire and life safety hazards specific to battery energy storage systems used for load shedding, load sharing, and other grid services (Chapter 12 Section 1206 of the 2019 CFC). In accordance with the CFC, the battery enclosures and the site installation design are required to be approved by the State Fire Marshal. If applicable, the BESS would be certified to UL 9540, the standard associated with control, protection, power conversion, communication, controlling the system environment, air, fire detection and suppression system related to the functioning of the energy storage system. The battery would be tested to UL 9540A, a test method intended to document the fire characteristics associated with a thermal event or fire and would confirm that the system will self-extinguish without active fire-fighting measures. The system would be designed such that, during a fire event, the results of the UL 9540A test would show that any internal fire is contained within the enclosure and not spread to the other parts of

the facility. The results of this test are used to inform facility safety system design and emergency response plans, which would be shared with first responders. The BESS system would be equipped with a dry agent fire suppression system. If smoke or heat were detected, or if the system were manually triggered, an alarm would sound, horn strobes would flash, and the system would release suppressant, typically FM-200, NOVEC 1230 or a similar clean agent[2] from pressurized storage cylinders. However, final safety design would follow applicable standards and would be specific to the battery technology chosen, including, but not limited to, National Fire Protection Association 855 (standard for the Installation of Stationary Energy Storage Systems) and Section 1206 of the California Fire Code.

During O&M activities, standard defensible space requirements would be maintained surrounding any welding or digging operations.

4.10.7. Required Approvals

The Applicant would obtain permits for the Project, as needed. Table 4-3, Permits and Approvals Necessary for the Proposed Project, lists permits and approvals that may be required for Project construction.

Table 4-3. 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 and Demolition	■ Grading and Wall Permits ■ Traffic Control Plans ■ Excavation Permit ■ Tree Removal Permit ■ Building permit for BESS ■ Demolition Permit

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 a mitigated negative declaration (MND) because the Initial Study (IS) 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. Building the Project at the proposed site places the BESS close to an existing substation and takes advantage of the existing transmission network already established at and near the site. Any alternative to the Project would require a parcel of land near an SVP substation, which would be difficult to find in the City, which is largely built out.

[2] Clean agents, including inert gases, are commonly used to suppress fires in machinery and electrical equipment, including occupied spaces, because they do not damage components and are considered safe for people and the environment.

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

5.1.1.1. 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.

5.1.1.2. 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 SVP property in an urbanized area of the City of Santa Clara. The site is located on a public surface street. The Project vicinity is highly developed, with the SVP Kifer Substation to the east, low intensity office developments to the north and west, and a continuation of the SVP parcel to the south. All parcels in the

Project vicinity are zoned for either Light Industrial use or Public or Quasi Public use, the latter of which is used for substations.

The land use in the area is a mix of light industrial and low intensity office/R&D, which includes data centers. 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, 2023).

Existing Views of the Project. Views of the proposed Project are limited by its location behind existing industrial developments, office buildings, and vegetation. The closest residential community to the Project is approximately 0.55 miles to the northeast. The Project would not be visible from this location due to the distance and dense urban development in the area. There are several trees on the site which would be removed during site preparation, as part of the Project.

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 building which is no longer in use. The building is currently overgrown with vegetation. These visual elements have been long established in the landscape. As well, the surroundings on all sides of the site consist of a densely built environment, with no sensitive receptors. The visual change proposed at the site would be largely viewed from nearby or adjacent businesses. The wall proposed to surround the site would screen ground-level views. There are no transmission poles currently at the site, and two poles would be added, neither of which would be directly on a public street. The new transmission line would interconnect with an existing transmission line. The visual change due to the Project would be visible to a limited number of people, mostly people who work at the adjacent office buildings, and would be consistent with the current visual character of the site and vicinity.

5.1.1.3. 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 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 BESS facility 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 vegetation and tree removal. 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 light industrial and low intensity office/R&D land uses, as defined in the City of Santa Clara General Plan. An abandoned building currently sits on the site.

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

Currently, the site is paved, and the site would be paved as part of the Project. The existing building, all vegetation, and all trees on the site would be removed. If necessary, trimming overhanging vegetation from adjacent parcels would be conducted. This removal would change the Project site, but would not be a significant change within the overall landscape, due to the urbanized character of area.

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. The surfaces of new structures and enclosures would be non-reflective and would not create glare. The existing nighttime lighting at the site consists of one light in the existing parking area and two street lights across the street from the Project site on Raymond Street. Adjacent properties also have night lighting.

For safety and security, low level lighting would be installed at the gates and at strategic locations around the facility. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. The lighting would conform to National Electric Safety Code (NESC) requirements and all applicable City of Santa Clara outdoor lighting standards.

There is existing lighting from the industrial developments near the entrance to the Project site on Raymond Street. 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, 2022). 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).

5.2.1.1. 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 KRS BESS 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 has 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), and nitrogen oxides (NOx) 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	0.09 ppm	—
	8-hour	0.070 ppm	0.070 ppm
Respirable Particulate Matter (PM10)	24-hour	50 µg/m^3	150 µg/m^3
	Annual Mean	20 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	—	35 µg/m^3
	Annual Mean	12 µg/m^3	12.0 µg/m^3
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm	0.100 ppm
	Annual Mean	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm	0.075 ppm
	24-hour	0.04 ppm	0.14 ppm
	Annual Mean	—	0.030 ppm

Notes: ppm=parts per million; µg/m^3= 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 non-compliance 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	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, 2023.

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. 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. The KRS BESS Project would not be considered a stationary source subject to risk assessment programs.

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). The site is surrounded by other light industrial uses, including office buildings and utilities. No air quality sensitive receptors are located within 1,000 feet of the Project site.

5.3.1.1. Regulatory Background

California Clean Air Act. The California CAA and the California Health and Safety Code requires each region to develop and implement strategies to attain CAAQS and establishes broad authority for California to regulate emissions from mobile sources. The BAAQMD must periodically prepare air quality management plans to show how the standards will be met. The 2017 Bay Area Clean Air Plan is the current control strategy to reduce emissions of ozone precursors and reduce transport of ozone and its precursors to neighboring air basins.

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 mobile off-road diesel engines model year 2012 or newer. Engines used in large generator sets became subject to Tier 4 exhaust emissions standards for model year 2015 and newer. These standards address NOx emissions 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 mobile-source NOx and toxic DPM. Depending on the size of the fleet of equipment, the fleet 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 City of Santa Clara, 2010-2035 General Plan (General Plan) includes the following air quality goals and policies to help promote sustainability and encourage land use and transportation patterns that reduce air pollutant emissions and to provide adequate buffer distances between sources and receptors (City of Santa Clara, 2014):

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

- **Policy 5.10.2-P3.** Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.
- **Policy 5.10.2-P4.** Encourage measures to reduce greenhouse gas emissions to reach 30 percent below 1990 levels by 2020.
- **Policy 5.10.2-P5.** Promote regional air pollution prevention plans for local industry and businesses.
- **Policy 5.10.2-P6.** Require "Best Management Practices" for construction dust abatement.
- **Policy 5.10.5-P35.** Establish minimum buffers between odor sources and new residential or other uses with sensitive receptors, consistent with BAAQMD guidelines, unless a project-specific study demonstrates that these risks can be reduced to acceptable levels.

The 2010-2035 General Plan also includes certain prerequisite goals and policies to support major strategies in the City and generally recognize the importance of planning from a "big picture" perspective, including the protection of community health, as follows (City of Santa Clara, 2014):

- **Policy 5.1.1-P24.** Prior to the implementation of Phase III, the City will include a community Risk Reduction Plan ("CRRP") for acceptable Toxic Air Contaminant ("TAC") concentrations, consistent with the Bay Area Air Quality Management District ("BAAQMD") CEQA Guidelines, including risk and exposure reduction targets, measures to reduce emissions, monitoring procedures, and a public participations process.

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 54 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 provide an electric transmission system resource that delivers stored electricity during peak times. By improving the delivery of electricity to the transmission system, the Project would support the primary goals of the 2017 Clean Air Plan and increased electrification of energy demands. 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.

A Project could be found 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. Since the Project would be unmanned, the Project would not require any new permanent full-time or part-time staff after construction is complete. Ameresco's existing operations and maintenance division will assign two staff who would provide O&M services as needed. 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 construction-phase activities include mobilizing vehicles and equipment for demolition and construction, crews, and materials. The site work would include demolition of the existing building, vegetation removal, grading, installing concrete foundations, installing prefabricated equipment, paving, and installing poles for the 60 kV line interconnection. 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 that includes particulate matter from ground-disturbing activities. The mobile sources would be a mix diesel-powered off-road construction equipment types, including: cranes, lifts, loaders, an auger drill rig, rollers, and small welders. On-road mobile sources would include diesel and gasoline-powered vehicles for linework and trucks for deliveries of concrete, water and other materials. Outside of the work site, construction traffic would cause exhaust emissions from the trucks and other vehicles used by crews, materials, and equipment to access the work site.

Construction is expected to take approximately 16 months. The peak number of construction personnel would be 25 workers, and traffic to and from the site during construction would not exceed approximately 30 trips per day.

Project-related construction emissions calculations rely on factors from the ARB EMFAC2017 model and other databases embedded in the California Emissions Estimator Model (CalEEMod), version 2020.4.0. The detailed emission calculations are based on the proposed workforce and types of equipment (see Project Description, Section 4.10.4). The activity details that were modeled and the results appear in CalEEMod output files (Aspen, 2023). Table 5.3-3 summarizes the maximum daily emission rates of the Proposed Project construction activity.

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

Construction Activity	VOC	NOx	CO	SO_2	PM10 (exhaust)	PM2.5 (exhaust)
Demolition	1.4	13.6	12.1	0.0	0.6	0.5
Site Preparation, Foundations	1.9	18.3	19.5	0.0	0.7	0.6
BESS Installation, Tie-Line	2.2	19.5	24.6	0.1	0.7	0.7
Paving	0.7	6.5	9.6	0.0	0.3	0.2
Cleanup	30.5	2.3	2.6	0.0	0.1	0.1
Maximum Daily Construction Emissions	**30.5**	**19.5**	**24.6**	**0.1**	**0.7**	**0.7**
Threshold of Significance	**54**	**54**	**None**	**None**	**82**	**54**

Source: CalEEMod Output Files; Aspen Environmental Group, 2023.

Table 5.3-3 shows that Project construction would not exceed the thresholds for individually significant Project impacts. With implementation of basic control measures recommended by BAAQMD, construction-related criteria air pollutants would not exceed thresholds that indicate cumulatively considerable levels.

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.

Concurrent construction of other projects near the Project site 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 near the Project site would also 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 a cumulatively considerable net increase of emissions would not occur due to construction dust, basic construction emissions control strategies are drawn from BAAQMD guidance (BAAQMD, 2017). The basic construction emissions control 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 mitigation, construction of the Project would not result in a cumulatively considerable net increase of any criteria pollutants for which the region in is nonattainment, and the construction-related emissions would not substantially contribute to any air quality violation. 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 KRS BESS Project. The Project would be unmanned, and monitoring and control functions for the new facilities would be assumed by Ameresco's existing staff. No additional operations staff would be hired by SVP as a result of the Project being put into service. Operational activities would not result in any net increase in mobile source emissions due to workers or staff maintaining the facility, and no new stationary sources are proposed. As a result, operation of the KRS BESS Project would not result in a cumulatively considerable net increase of any criteria pollutant. 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 and onto roadways accessing the site. For assessing community risks and hazards, the BAAQMD recommends evaluation of sources and receptors within 1,000 feet of the Project property boundary (BAAQMD, 2017). No air quality sensitive receptors are located within 1,000 feet of the Project 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 vehicles and equipment for demolition and construction, crews, and materials, and use of fleet of diesel-powered offroad equipment on the site to install the Project components.

Construction equipment and vehicles would access and move within the Project site throughout the construction duration of approximately 16 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. Operational activities would not result in any net increase in mobile source emissions that could 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. Odors that occur in equipment exhaust would be minimized by mandatory use of ultra-low sulfur diesel fuel. 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 is located on a fully developed parcel in the City of Santa Clara, surrounded by urban development. The Project site has been developed and physically altered such that native vegetation communities are no longer present. A few trees are located in the northern portion of the Project area. Ornamental landscaping is also present along the northern and northeastern property line and around the existing, vacant building on the site.

5.4.1.1. Special-Status Plants and Animals

Due to the absence of suitable habitat in this highly urbanized environment there are no special-status plants or animals likely to occur in the Project area. The ground cover on the Project site is concrete pavement, and the limited vegetation consists of ornamental landscaping and approximately 11 trees.

Animals that may occur in the vicinity would include urban-adapted birds and mammals such as raccoon, skunk, and opossum. Except for a driveway onto the property, access to and through the site is impeded by existing fencing and adjacent urban development.

5.4.1.2. Nesting Birds

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

5.4.1.3. Jurisdictional Waters

There are no jurisdictional waters or features within the Project site.

5.4.1.4. 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 determi-

nation 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.

5.4.2.1. Special-Status Plants and Wildlife

A review of the California Natural Diversity Data Base (CNDDB) did not identify any occurrences of special status species overlapping the Project site. As previously described, the site is largely devoid of vegetation. Landscaped trees, shrubs, and other vegetation are found on the Project site; however, it is in a highly developed, built out urban area and does not include suitable habitat for any special-status plant species.

5.4.2.2. Nesting Birds

A variety of common birds may nest in the Project vicinity and in trees on the Project site. Nests may be built in trees or other vegetation, on the ground, or on existing vacant 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) could adversely impact breeding birds by removing potential nesting habitat (e.g., trees and other vegetation). Other adverse impacts may include 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 mitigation measures MM BIO-1, MM BIO-2, and MM BIO-3.

MM BIO-1 (Biological Monitoring) 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. If tree/vegetation trimming or removal and/or construction activities occur during the bird breeding and nesting season (February 15 through August 31), preconstruction nesting surveys would be performed by a qualified biologist within 7 days prior to the start of construction. This time window is necessary to ensure that nests are identified. 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 animal. 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.** During the nesting season (February 1 to August 31), preconstruction nesting bird surveys shall be conducted on the site and vicinity by a qualified biologist no more than 7 days before any work activities are performed. A preconstruction nesting bird survey shall also 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. No impacts would occur.

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 on or near the Project site. No impacts would occur.

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. Except for a driveway onto the property, wildlife movement through the site is impeded by existing fencing and adjacent urban development. Construction of the Project includes installation of a permanent fence and a wall, which would result in no change to migratory movement. The Project site does not provide wildlife nursery opportunities. Impacts will be less than significant.

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 trees within the Project site that would be removed may be 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 tree replacement, 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. No impacts would occur.

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.

5.5.1.1. Environmental Setting

The Project area is located in a previously disturbed and entirely built environment. The City of Santa Clara General Plan designates the KRS BESS Project area as Low Intensity Office/Research and Development (R&D). All adjacent parcels to the north, south, and west have the same General Plan Designation. The parcel to the east of the Project, which is where the Kifer Receiving Station is located, has a General Plan Designation of Light Industrial. The site is surrounded by other light industrial uses, including office buildings and utilities. There is one road, Raymond Street, adjacent to the Project site is a two-lane surface street.

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, 1991).

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 5.18, 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; Winther, 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; Winther, 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 submitted a California Historical Resources (CHRIS) Data Request for the Project to the Northwest Information Center at Sonoma State University requesting data within 0.25 miles of the Project area. On January 6, 2023, the results were received identifying two previously recorded resources/sites and within 0.25 miles of the Project area. Neither of these resources are within the Project area. Additionally, the record search identified a total of 51 previously cultural resources studies within 0.25 miles of the Project area. Of these 51 studies, 23 of them include all or a portion of the Project area in the study (Table 5.5-1).

The records search included consultation of the following registers and lists.

- National Register of Historic Places (NRHP)
- California Register of Historic Resources (CRHR)
- California State Historical Landmarks
- California Points of Historical Interest
- California Inventory of Historic Resources
- Santa Clara County Heritage Resource Inventory
- California Built Environment Resource Directory (BERD)
- City of Santa Clara Historic Survey Complete Report – 1981

Table 5.5-1. Key Cultural Resources Reports Within Project Area

Report No.	Author	Year	Study
S-000848	David A. Fredrickson	1976	A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources
S-003453	Roy Meadows, Roy Martin, and Ann Fisher	1950	Notes on the Carmel Indians (notes taken from Roy Meadows and Roy Martin on March 4th, 1950); and Southern Costanoan-Esselen Notes (notes taken from Ann Fisher on March 4th, 1950)
S-005259	Ann Hines, Pauline Pace, and Gail Woolley	1979	Santa Clara County Heritage Resource Inventory
S-005260	Joseph C. Winter	1978	Tamien - 6000 Years in an American City
S-005272	Jan Otto Marius Broek	1932	The Santa Clara Valley, California: A Study in Landscape Changes

Table 5.5-1. Key Cultural Resources Reports Within Project Area

Report No.	Author	Year	Study
S-007483	Albert B. Elsasser, et al.	1985	Revised Data Recovery Plan, Part I: Review of the Prehistory of the Santa Clara Valley Region as Part of the Guadalupe Transportation Corridor Compliance with 36 CFR Part 800
S-008585	Thomas King, et al.	1974	Archaeological Element, Environmental Impact Report on the San Felipe Water Distribution System
S-009462	Teresa Ann Miller	1977	Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties
S-009583	David W. Mayfield	1978	Ecology of the Pre-Spanish San Francisco Bay Area
S-013200	Donna M. Garaventa, et al.	1991	Cultural Resources Assessment for the Santa Clara County Transportation Plan - T2010 EIR
S-015529	Robert L. Gearhart II, et al.	1993	California, Oregon, and Washington: Archaeological Resource Study
S-016394	Colin I. Busby, et al.	1994	Recorded Archaeological Resources in Santa Clara County, California (Plotted on the BARCLAY 1993 LoCaide Atlas)
S-016394a	Colin I. Busby, et al.	1995	First Supplement, Recorded Archaeological Resources in Santa Clara County, California
S-016394b	Colin I. Busby, et al.	1996	Second Supplement, Recorded Archaeological Resources in Santa Clara County, California
S-016394c	Colin I. Busby, et al.	1997	Third Supplement, Recorded Archaeological Resources in Santa Clara County, California
S-017852	Jacquelin Jensen Kehl and Linda Yamane	1995	Ethnohistoric Genealogy Study, Tasman Corridor Light Rail Project, Santa Clara County, California
S-018217	Glenn Gmoser	1996	Cultural Resource Evaluations for the Caltrans District 04 Phase 2 Seismic Retrofit Program, Status Report
S-020395	Donna L. Gillette	1998	PCNs of the Coast Ranges of California: Religious Expression or the Result of Quarrying
S-024967	Basin Research Associates, Inc.	2000	Cultural Resources Review (Positive), Proposed RCN Fiber Optic Cable Program, City of Santa Clara, Santa Clara County
S-030204	Donna L. Gillette	2003	The Distribution and Antiquity of the California Pecked Curvilinear Nucleated (PCN) Rock Art Tradition.
S-032596	Randall Milliken, Jerome King, and Patricia Mikkelsen	2006	The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways
S-033600	Jack Meyer and Jeff Rosenthal	2007	Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4
S-039091	Basin Research Associates	2010	Historic Property Survey Report/Finding of Effect, South Bay Water Recycling (SBWR), Santa Clara Industrial 3B, City of Santa Clara, Santa Clara County
S-046375	Archives and Architecture, LLC.	2012	County of Santa Clara Historic Context Statement
S-048927	Donald Scott Crull	1997	The Economy and Archaeology of European-made Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington
S-049780	Brian F. Byrd, et al.	2017	San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4
S-049780a	Julianne Polanco	2016	FHWA_2016_0615_001, Caltrans District 4 Archaeological Context

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

In-depth historical research was conducted including but not limited to consultation of historic maps, historic and current aerial photographs, historic newspapers and various online databases, a detailed examination of previously prepared cultural survey reports provided by the Northwest Information Center, a review of data provided to Aspen by SVP, in an effort to determine the potential historic significance of the office building, storage building, and any other features located within APN# 224-08-085 (Study Area) or Project area. Based on this research and a built environment survey of the Project area conducted under the under the direction of an NPS qualified Architectural Historian, it was determined that these features did not meet State or Federal criteria for listing on national, state, or local historic registers, meaning they do not qualify as historical resources under CEQA. Specifically,

1. The office building and storage building located at 3025 Raymond Street were originally permitted in 1971. They are barely 50 years old and are of ubiquitous design. Although largely unaltered, they do not appear to be historically or architecturally unique, have no apparent individually significant engineering features, and do not exhibit any unusual use of materials or building fabric.
2. The office building and storage building located at 3025 Raymond Street are not associated with known historical events of significance, and do not appear to have risen to a level of important state or local historic significance.
3. The office building and storage building located at 3025 Raymond Street are not known to be associated with any important architect, engineer, contractor, or any individual that appears to have risen to a level of important state or local historic significance.

5.5.1.2. 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 following overarching Goals and Policies are identified with regard to architectural and built environment resources:

City of Santa Clara Historical and Landmarks Commission. To support its historic preservation goals, the City established a Historical and Landmarks Commission and obtained recognition by the State Office of Historic Preservation 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, and 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.*

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 office building and storage building located at 3025 Raymond Street were permitted and built beginning in 1971. Because these buildings are greater

than 50 years old, they are considered historic age resources. However, an evaluation of the site and all built environment features based and field inspection and on historic records has concluded that these buildings do not meet the established criteria to be considered as a significant resource eligible for inclusion on local, State, or Federal registers, 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 in the immediate vicinity of 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, thereby reducing this impact to less than significant.

5.5.2.1. 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.

5.5.2.2. 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.

5.5.2.3. 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 of the site is to be called and informed of the discovery. 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 construct and operate a BESS facility and 60 kV interconnection line.

As the City of Santa Clara municipal electric utility, 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, 2021).

The proposed Project includes partnering with a company, Ameresco, who would build and operate the Project. Ameresco would lease the land from SVP. SVP would pay Ameresco a monthly kW-month rate for the ability to schedule and dispatch the BESS Project into the CAISO market. The BESS will charge during the hours of the day when the CASIO's Day Ahead prices are the lowest, and discharge during the hours of the day when the CAISO's Day Ahead prices are the highest.

The energy sources that make up the mix of power supplied to SVP's customers, relative to the 2021 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, 2023a).

Table 5.6-1. Energy Sources of Electricity Supplied to Customers (2021 Power Content)

Energy Resources	Santa Clara Residential Mix	Santa Clara Non-Residential Mix	2021 California Power Mix
Eligible Renewable	**35.9%**	**27.0%**	**33.6%**
Biomass & biowaste	0%	2.1%	2.3%
Geothermal	0%	7.1%	4.8%
Eligible hydroelectric	0%	5.9%	1.0%
Solar	14.7%	4.1%	14.2%
Wind	21.2%	7.8%	11.4%
Coal	**0%**	**0%**	**3.0%**
Large Hydroelectric	**64.1%**	**6.7%**	**9.2%**
Natural Gas	**0%**	**34.3%**	**37.9%**
Nuclear	**0%**	**0%**	**9.3%**
Other	**0%**	**0%**	**0.2%**
Unspecified sources of power*	**0%**	**32%**	**6.8%**
Total	**100%**	**100%**	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
Source: CEC 2023a, 2021 Power Content Label for SVP.

For recent years including 2021, the average annual electricity consumption served to SVP customers has grown to approximately 4,382 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	2017	2018	2019	2020	2021
Ag & Water Pump	0.03	0.03	0.08	0.10	0.10
Commercial Building	2,332.19	2,393.16	2,437.06	2,547.24	3,090.69
Commercial Other	41.00	41.52	43.80	44.25	46.23
Industry	896.16	862.57	821.66	816.73	910.88
Mining & Construction	18.76	24.74	35.63	46.50	80.18
Residential	235.64	226.01	234.49	264.73	251.08
Streetlight	4.30	3.50	3.00	3.00	3.00
SVP Total Usage	3,528.08	3,551.53	3,575.73	3,722.54	4,382.15

Note: Usage expressed in millions of kWh (one million kWh equals one gigawatt-hour or GWh).
Source: CEC, 2023b; Electricity Consumption by Entity.

5.6.1.1. 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. The IRP must also consider how renewable generation, grid operational efficiencies, energy storage, and distributed resources (including energy efficiency) serve to meet the peak hour energy and reliability needs. In November 2018, the City Council approved SVP's current IRP (SVP, 2019).

Energy Storage Targets. Assembly Bill 2514 (Skinner, Chapter 469, Statutes of 2010) (AB 2514), amended by Assembly Bill 2227 (Bradford, Chapter 606, Statutes of 2012), requires California's publicly owned

utilities to develop energy storage procurement targets. In response to these requirements, SVP periodically evaluates the viability of energy storage projects and considers energy storage as a resource to reduce the need for new or additional gas-fired generation and provide other benefits to the distribution and transmission system.

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?

The proposed Project would construct, operate, and maintain a BESS facility and 60 kV interconnection line. The objectives of the proposed Project are to increase the reliability and flexibility of SVP's electrical grid and to help solve California's "duck curve" power production problem. The proposed Project would achieve these objectives by utilizing the BESS to store energy. The proposed Project would allow SVP to store energy and discharge it to the electrical grid during periods of high demand.

Energy storage would improve SVP's ability to efficiently integrate renewable resources. The growth of zero-carbon resources, especially solar resources, has shifted the reliability concerns from the peak hour (hour with the highest energy demand) to net peak hours (hours when energy demand minus wind and solar generation is largest). The changing resource mix is driving a change in the characteristics of the electricity system and requires consideration of the net demand curve, total electricity demand less the wind and solar generation. The "duck curve" is characterized by more drastic increases in net demand in the evening hours as solar decreases, and a net peak that occurs later in the evening when solar generation is substantially diminished or nonexistent (CEC, 2022). By charging during low net demand periods and discharging in higher net demand periods, the proposed Project would increase SVP's ability to use renewable energy when demand is highest.

LESS THAN SIGNIFICANT – CONSTRUCTION. 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.

LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE. Operations, including inspection, patrol, and maintenance, of the proposed Project components would also require use of fossil fuel resources for routine upkeep. The energy being stored by the BESS would be delivered to the BESS from the mix of renewable and fossil fuel powered generation resources available at the time of charging. This energy would be discharged during periods of high demand, when fossil fuel resources are most likely to be called upon. As a result, the energy discharged by the BESS would be likely to displace the use of fossil fuel resources during periods of high demand. The operation and maintenance activities would be minimal and 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 construct, operate, and maintain a BESS facility and 60 kV interconnection line. The Project would be interconnected to SVP's existing system, via the KEN-OKJ 60 kV line between Kenneth Substation and Oaks Junction Substation. Protection and control panel upgrades or configuration will be required at the Kenneth and Oaks Junction Substation. The Project would increase the reliability and flexibility of SVP's electrical grid.

Energy storage provides benefits to utilities by efficiently integrating increased amounts of renewable energy resources into the electrical transmission and distribution grid in a manner that can avoid use of fossil fuel resources during peak hours and minimize GHG emissions. The 2018 revised IRP addresses the requirements of AB 2514 and identifies SVP's efforts in considering viable and cost-effective energy storage systems as ways to provide savings and reliability benefits within the electricity resource supply plan (SVP, 2019). SVP was required to open an energy storage system procurement proceeding and adopted an energy storage procurement target; a 50 MW research and development energy storage opportunity was identified for negotiation at that time (SVP, 2019). The proposed Project would contribute to SVP's efforts to achieve the benefits of energy storage on the electrical grid. 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.

5.7.1.1. Regional Geologic Setting

The Project site is located in the Santa Clara Valley, a relatively flat, elongate alluvial basin, in the Coat Ranges geomorphic province of California. The Santa Clara Valley is part of large structural depression that extends from south of Hollister to north of Santa Rosa and includes the San Pablo and San Francisco Bays (Norris & Webb, 1976). 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 Coast Ranges geomorphic province 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 Santa Clara Valley 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)

5.7.1.2. 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 primarily 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 Holocene alluvial clay soil which includes bay mud deposits (Dibblee and Minch, 2005) and as Holocene fine grained alluvial fan deposits generally containing large percentages of clay and fat clay (CGS, 2001). Based on Pleistocene alluvium contour mapping (Helley, 1990), Pleistocene alluvium is located between approximately 5 to 10 feet below the overlying Holocene alluvium.

Artificial Fill. Although not mapped at the Project site or immediate vicinity (Dibblee and Minch, 2005), 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 site. 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)

5.7.1.3. 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 entirely underlain by the Urban Land-0 to 2 percent slopes-basins soil unit. Urban Land-0 to 2 percent slopes-basins soils consist of disturbed/human transported material on basin floors (NRCS, 2023).

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 of the Urban Land-0 to 2 percent slopes-basins soils underlying the Project site is undetermined (NRCS, 2023), however the site is mapped as being underlain by alluvial clay (Dibblee and Minch, 2005) that may contain expansive soils due to the high clay content.

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 not identified for wind or water at the Project site (NRCS, 2023), however the geologic unit underlying the Project site is mapped as alluvial clay and is thus not expected to be highly erodible (Dibblee and Minch, 2005).

5.7.1.4. Subsidence

Land subsidence can occur in valleys containing aquifer systems that are, in part, made up of fine-grained sediments and that have undergone extensive groundwater development. As the groundwater is withdrawn, the pore-fluid pressure in the sediments decreases allowing the weight of the overlying sediment to permanently compact or compress the fine-grained units. This effect is most pronounced in younger, unconsolidated sediments. Land subsidence is generally characterized by a broad zone of deformation where differential settlements are small. The main cause of subsidence in California is groundwater pumping. The effects of subsidence include damage to buildings and infrastructure, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems (USGS, 2023a).

Between about 1915 and 1969, the northern portion of Santa Clara County experienced as much as 13 feet of subsidence caused by excessive pumping of groundwater. Over 100 square miles from San Jose to southern San Francisco Bay were impacted (SCCVWD, 2023). The Santa Clara Valley Water District aquifer recharge efforts starting in the mid-1930s of building dams, importing water, and implementing a pumping tax in 1964 proved successful in allowing groundwater levels to recover (USGS, 2023a). By about 1970, subsidence was essentially halted because of Santa Clara Valley Water District's investments in reservoirs, diverse water supplies, and groundwater recharge, along with management programs that allowed groundwater conditions to recover (SCCWD, 2023).

5.7.1.5. 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, 2023a).

5.7.1.6. Seismicity

Per the Alquist-Priolo Act, seismic faults can be classified as a Holocene active, a Pre-Holocene, Age-undetermined, or inactive, based on the following criteria (CGS, 2018):

- Holocene-active faults: Faults that have moved during the past 11,700 years. This age boundary is an absolute age (number of years before present) and is not a radiocarbon (^{14}C) age determination, which requires calibration in order to derive an absolute age.
- Pre-Holocene faults: Faults that have not moved in the past 11,700 years, thus do not meet the criteria of "Holocene-active fault" as defined in the A-P Act and SMGB regulations. This class of fault may be still capable of surface rupture but is not regulated under the A-P Act. Depending on available site-specific and regional data such as proximity to other active faults, average recurrence, variability in recurrence, the timing of the most recent surface rupturing earthquake, and case studies from other surface rupturing earthquakes, the Project geologist may, but is not required to, recommend setbacks. Engineered solutions can also be considered by a licensed engineer operating within his or her field of practice.
- Age-undetermined faults: Faults where the recency of fault movement has not been determined. Faults can be "age-undetermined" if the fault in question has simply not been studied in order to determine its recency of movement. Faults can also be age-undetermined due to limitations in the ability to constrain the timing of the recency of faulting. Examples of such faults are instances where datable materials are not present in the geologic record, or where evidence of recency of movement does not exist due to stripping (either by natural or anthropogenic processes) of Holocene-age deposits. Within the framework of the A-P Act, age-undetermined faults within regulatory Earthquake Fault Zones are considered Holocene-active until proved otherwise.
- Inactive: A fault may only be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and locally may not exist.

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 and is considered an active fault.

The Project area will be subject to regional ground shaking associated with earthquakes on faults of the San Andreas fault system. Active faults of the San Andreas system are predominantly strike-slip faults accommodating translational movement between the Pacific and North American tectonic plates.

Significant damaging earthquakes that have occurred on the San Andreas fault system within 50 miles of the Project site include:

- M7.9 1906 San Francisco Earthquake, the M6.9 1989 Loma Prieta Earthquake – resulted in 3,000 dead and $524 million in property damage (includes damage from fire);
- M7.4 1838 San Andreas Fault Earthquake – magnitude estimated due to damage, resulted in damage in San Francisco and Santa Clara;
- M 6,9 1989 Loma Prieta Earthquake – resulted in 63 dead, 3,737 injured, and $6 billion in property damage, and
- M6.8 1868 Hayward Fault Earthquake - 30 dead and $350,000 in property damage (USGS, 2023b; CGS, 2023a).

Periodic earthquakes accompanied by surface displacement can be expected to continue in the Project area. 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]	Fault Type[1]
Hayward–Rodgers Creek	5.9[2]	6.8–7.3	Right Lateral Strike Slip, 90◦ dip
Monte Vista–Shannon	6.9[2]	6.5	Thrust Fault, dips 45°W
Calaveras	9.2[2]	6.4–7.0	Right Lateral Strike Slip, 90◦ dip
San Andreas	11.1[2]	7.1-7.9	Right Lateral Strike Slip, 90◦ dip
Zayante-Vergeles	19.9	7.0	Right Lateral Strike Slip, 90◦ dip
Greenville Connected	24.1	7.0	Right Lateral Strike Slip, 90◦ dip
San Gregorio Connected	24.7	7.5	Right Lateral Strike Slip, 90◦ dip
Mount Diablo Thrust	25.4	6.7	Blind Thrust, dips 38° NE
Monterey Bay–Tularcitos	32.8	7.3	Right Lateral Strike Slip, 90◦ dip
Great Valley 7	34.1	6.9	Blind Thrust, dips 15° W
Green Valley Connnected	36.2	6.8	Right Lateral Strike Slip, 90◦ dip
Ortigalita	37.6	7.1	Right Lateral Strike Slip, 90◦ dip
Great Valley 8	43.8	6.8	Blind Thrust, dips 15° W
Great Valley 5 , Pittsburg Kirby Hills	44.5	6.7	Blind Thrust (reverse), dips 90°
Quien Sabe	44.9	6.6	Right Lateral Strike Slip, 90◦ dip
Rinconada	49.5	7.5	Right Lateral Strike Slip, 90◦ dip

1 Fault distances and type obtained from the 2008 National Seismic Hazard Maps – Source Parameters website (USGS, 2023c). Fault distances measured to generalized to the National Seismic Hazard Map (NSHM) fault trace.
2 Fault distance modified using USGS and CGS Quaternary Faults data (USGS and CGS, 2023).
3 Maximum Earthquake Magnitude – the maximum earthquake that appears capable of occurring under the presently known tectonic framework; magnitude listed is “Ellsworth-B” magnitude from USGS 2008 National Seismic Hazard Maps - Source Parameters unless otherwise noted.
4 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 Alquist-Priolo zoned Hayward fault (part of the Hayward-Rodgers Creek fault zone), no known active or potentially active faults are mapped crossing or immediately adjacent to the Project site (CGS, 2023b). Additionally, the City of Santa Clara is not crossed by any faults zoned under the Alquist-Priolo Earthquake Fault Zoning Act (CGS, 2023b; 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 49 earthquakes of M 5.5 or greater which includes 19 earthquakes of M 6.0 to M 6.9, and two earthquakes of greater than M 7.0. These include two catastrophically damaging earthquake: the 1906 M 7.9 San Francisco Earthquake and the 1989 M 6.9 Loma Prieta Earthquake and its aftershocks (USGS, 2023b).

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 Maps (NSHM) were used to estimate approximate peak ground accelerations (PGAs) in the proposed Project area. The NSHMs 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 between 0.80 and 1.2 g, which corresponds to strong to very strong seismically induced ground shaking (USGS, 2023d). 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 a 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 a mapped CGS liquefaction hazard zone (CGS, 2023b). Additionally, the Project site is underlain by potentially liquefiable young alluvial sediments with shallow (less than 10 feet below ground surface) to artesian water levels (water levels that flow to the surface) (CGS, 2001; DWR, 2023).

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 Project site 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). Pleistocene alluvial sediments may be found at depths of 5 to 10 feet below Holocene alluvium in the Project area (Helley, 1990).

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 approximately 10 feet for the 60 kV transmission line structures. All other excavations would be at shallower depths.

5.7.1.7. 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 California Fire Code, Title 24, Part 9, Chapter 12 (CFC, 2019). The California Fire Code, Title 24, Part 9, Chapter 12 provides codes and standards for design and construction of Energy Systems as it relates to fire safety. Section 1206 specifically applies to electrical Energy Storage Systems (ESS) and provides information on permit, construction, hazard mitigation, and operational requirements. It also includes a requirement that ESS structures shall comply with seismic design requirements of CBC Chapter 16.

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 taphonomy (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 to very strong ground shaking in the event of a large earthquake with PGAs ranging from 0.80 to 1.2 g for a 2 percent probability of exceedance in 50 years for the Project area. 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.

There will be no full-time onsite workers or occupied structures as part of the Project; workers will be onsite periodically for as needed inspections and maintenance during Project operation. The proposed BESS system (including the BESS units and enclosures and the PCS and their enclosures), and the 60 kV line may be subject to strong to very strong ground shaking during the Project's lifetime. While the potential for seismically induced ground shaking in the Proposed Project area during Project operation is unavoidable, the BESS and PCS structures and the 60 kV line would be designed per all applicable local and State seismic design criteria. Design of these structures to all appropriate seismic design criteria reduces the potential for loss, injury, or death of workers or the public to less than significant.

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 alluvial sediments and very shallow groundwater. Therefore, the potential for liquefaction-related damage to the BESS system and 60 kV line is high. The BESS system structures would be designed to appropriate local and State guidelines. However, 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.** Because seismically induced liquefaction-related ground failure has the potential to damage or destroy Project components, design-level geotechnical investigation for the Project shall be performed by SVP and shall include investigations designed to assess the potential for geologic and seismic hazards, and specifically include evaluation of potential for liquefaction and expansive soils to affect the BESS system components and the 60 kV line at the Project site. Where liquefaction or expansive soils 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. Finalized Project design incorporating geotechnical recommendations shall be submitted to the City 60 days prior to Project construction.

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. The Project site is not located within or near a CGS designated landslide hazard area (CGS, 2023a). Therefore, landslides and other slope failures are highly unlikely to occur and 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 WITH MITIGATION INCORPORATED. The Project site is flat to nearly flat, however some grading and excavation would occur as part of Project construction. 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. Sediment controls would be implemented to prevent water or wind disturbance and migration of the earth. 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. Implementation of this measure would ensure that the potential erosion or loss of topsoil is limited and reduced to a less than significant impact.

Mitigation Measure for Soil Erosion or Loss of Topsoil

MM HYD-1 **SWPPP or Erosion Control Plan Development and Implementation.** (see full text in Section 5.10, Hydrology and Water Quality)

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, compliance with applicable local and State design regulations and implementation of mitigation measure MM G-1 (Conduct geotechnical investigations) 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. Although the Project site is located in an area with known historic subsidence, subsidence in the Santa Clara Valley has been controlled/stopped due to activities and procedures put in place by the Santa Clara Valley Water District and the Project will not construct any new groundwater extraction wells and would not contribute to declining water levels and subsidence. Thus, there would be no impact from subsidence.

Mitigation Measure for Seismically Induced Liquefaction

MM G-1 **Conduct Geotechnical Investigations.** (see full text above)

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 is underlain by soils mapped as an Urban Land soil unit with undetermined expansive poten-

tial. However, the mapped geologic unit underlying the Project site is known to contain high percentage of clay and therefore may be expansive. Expansive soils could impact the integrity and stability of BESS system foundations, damaging structures and potentially injuring workers. Compliance with local and State design requirements would reduce potential impacts from expansive soils. However, to ensure that direct and indirect impacts associated with expansive soils would be less than significant, mitigation measure MM G-1 (Conduct Geotechnical Investigations) 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-1 **Conduct Geotechnical Investigations**. (see full text above)

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 for excavation and grading. Geologic units underlying the site consist of undetermined depths of artificial fill, Holocene alluvium, and Pleistocene alluvium. Depth to Pleistocene alluvium at the site is estimated at 5 to 10 feet below ground surface (Helley, 1990). Although it is unlikely that the limited Project excavation and grading would exceed these depths, there is a chance that Project ground disturbance could potentially encounter older Quaternary alluvium (Pleistocene alluvial sediments) that may contain unique paleontological resources or sites. The possibility that previously unknown paleontological resources could be discovered and damaged or destroyed during Project ground disturbance would potentially constitute a significant impact absent mitigation. Implementation of mitigation measure MM G-2 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 Paleontological Resources

MM G-2 **Worker Training and Management of Paleontological Resources.** 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. The qualified professional paleontologist shall prepare a Paleontological Worker Environmental Awareness Program (WEAP), and training shall be provided for all staff who will be onsite during excavations. The WEAP shall show what local Pleistocene fossils look like in general, where they may appear in the Project, and how to proceed should material suspected to be a fossil is encountered.

The 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 PRMP shall include:

- A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. The Paleontologist shall determine a suitable monitoring schedule based on construction activities and anticipated depth

of ground disturbance. 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.

5.8.1.1. 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). AB 32 requires ARB to update the Scoping Plan at least every 5 years. Accordingly, the ARB released a 2022 Scoping Plan Update in November 2022 (ARB, 2022).

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 ecosystems 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. The 2022 Scoping Plan Update assesses progress towards achieving the updated 2030 targets, while laying out a path to achieve the SB 100 target of carbon neutrality no later than 2045 (ARB, 2022).

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 construction 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 16-month period of construction would be around 788 MTCO2e (Aspen, 2023), 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. During operation, the quantity of GHG emitted is

expected to be approximately 134 MTCO2e per year (Aspen, 2023). These operational emissions would comply with the BAAQMD's project-level threshold of significance, which is annual emissions of less than 1,100 MTCO2e per year. Therefore, impacts 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 2022 Scoping Plan Update (ARB, 2022) 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 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 installing battery energy storage, the Project would be likely to improve SVPs reliability and flexibility in delivery of electricity in compliance with California's RPS requirements. Increasing the use of renewable generation in conjunction with energy storage is important to the overall objective of decarbonizing the electricity sector (ARB, 2022).

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.

5.9.1.1. 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.

5.9.1.2. 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. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and county regulations. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of the Project's construction.

Asbestos Containing Material and Lead Based Paint. As part of the Project the existing building on the Project site will be demolished. Due to the age of the building, more than 50 years old, there is a potential that asbestos containing material (ACM) and lead based paint (LBP) may be present on or in the building.

5.9.1.3. Battery Energy Storage Systems

A battery energy storage system (BESS) is a type of system that uses an arrangement of batteries and other electrical equipment to store electrical energy. Containerized systems, which are one form of a modular design, have become a popular means of integrating BESS projects efficiently. The battery storage enclosures include battery cells/modules, an HVAC system, a Battery Management System, and Fire Suppression.

Large-scale BESS are commonly designed for high-powered and rapid-charge cycles that can generate heat quickly and affect the safe operation of the batteries (Conzen et al, 2022). BESS require a reliable and well-performing cooling system that either directly cools the battery cell/modules or cools the enclosure in which the battery packs are installed. Failures of the BESS cooling or fire prevention systems can result in fires and explosions within BESS containers. This can occur under a variety of scenarios (i.e., short circuit), in which the stored chemical energy is converted to thermal energy with the results of cell rupture and the release of large amounts of flammable and potentially toxic gases, which can lead to fire and explosion (Conzen et al, 2022). As of June 2021, approximately 30 global large-scale BESS have experienced failures and destructive fires.

5.9.1.4. Environmental Contamination

The Project site is located near commercial and light industrial properties. A review of the State Water Resources Control Board (SWRCB) GeoTracker (SWRCB, 2023a) and California Department of Toxic Substance Control (DTSC) EnviroStor databases (DTSC, 2023a) revealed there are 28 GeoTracker and 16 EnviroStor listed sites within 0.5-mile radius of the proposed Project site. Of the Geotracker sites 5 are open sites with known or potential environmental contamination and 23 are completed case closed sites (SWRCB, 2023a). Ten of the EnviroStor sites are listed as Inactive-Needs Evaluation, 1 is listed as No Further Action, 1 is listed as No Action Required, 2 are certified Closed sites, and 2 sites were referred to other agencies and closed with one having a Land Use/Deed Restriction (DTSC, 2023a).

The 5 open GeoTracker listings area all Cleanup Program sites, and 11 cleanup program site sites. All 17 of the LUST sites are listed as completed case closed with 4 of the sites located upgradient of the Project site. The two closest upgradient cleanup program sites to the Project site are: Owens Corning Fiberglass located approximately 900 feet south of the Project site, listed as open-verification as of 2009 with continuing soil vapor monitoring but a with a recommendation from the RWQCB for closure in regard to VOC groundwater contamination (SWRCB, 2023b); and 715 Comstock Industrial Property (T10000018684) located approximately 1350 feet southeast of the Project, listed as open-site assessment as of 2022 with VOC and TPH contaminated soil and groundwater and an approved Assessment work plan as of January 2023 (SWRCB, 2023c). The 2 remaining upgradient Site Cleanup sites are both located approximately 2100 feet south to southeast of the Project site and are both undergoing remediation for VOC groundwater contamination and have both submitted remediation completion reports in 2021 (SWRCD, 2023d and e).

None of the case closed LUST site present a contamination hazard to the Project site, except potentially the closed LUST located on the southern Portion of the Project parcel. The Pacific Bell (T0608502404) closed LUST case is located at 3205 Raymond Avenue, the same address as the Project site, however the LUST was located in the southern half of the parcel adjacent to the other building, approximately 130 feet south of the Project site and was case closed in 2001(SWRCB, 2023f). Soil and groundwater sampling conducted at the time of the gasoline tank removal indicated no TPH, VOCs, or MTBE detected in soil, however TPH, VOCs, and MTBE were detected in the underlying groundwater (SWRCB, 2023f). The site underwent remediation and groundwater monitoring and was granted case closure in 2001, with the note that residual petroleum hydrocarbons still existed in the groundwater but at levels below regulatory concern (SWRCB, 2023f).

Five of the EnviroStor sites are located upgradient of the Project site and none have existing contamination issues that present a contamination hazard to the Project site (DTSC, 2023a).

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, 2021b).

5.9.1.5. Schools

There are no schools or daycare facilities located within a 0.25-mile radius of the Project site. The closest school to the site is the Montague Elementary School of the Santa Clara Unified School District, located approximately 0.85 miles northeast of the Project site.

5.9.1.6. Airports and Airstrips

The Norman Y. Mineta San Jose International Airport (Airport) is located approximately 0.5 miles east of the Project site. A review of the Santa Clara County Comprehensive Land Use Plan (CLUP) for the Airport indicates that the Project site is beneath a mapped flight path and is located between the 65 dB and 70 dB Aircraft Noise Contours (SCCALUC, 2016). Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace, establishes imaginary surfaces for airports and runways as a means to identify objects that are obstructions to air navigation. Each surface is defined as a slope ratio or at a certain altitude above the airport elevation. The Project site is located between the 162 fand 212 feet above Mean Sea Level FAR Part 77 Surface zone of maximum structure height (SCCALUC, 2016). The Project site is at the northwestern edge of the designated Airport Turning Safety Zone (TSZ) and within the Traffic Pattern Zone (TPZ) for the Airport. The TSZ represents the approach and departure areas that have the third highest level of exposure to potential aircraft accidents. The TPZ is that portion of the airport area routinely overflown by aircraft operating in the airport traffic pattern and the potential for aircraft accidents is relatively low and the need for land use restrictions is minimal in the TPZ (SCCLAUC, 2016).

5.9.1.7. Wildfire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) identifies, and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors. The maps identify this information as a series of Fire Hazard Severity Zones, which are progressively ranked in severity as un-zoned, moderate, high, and very high. Wildland fire protection in California is the responsibility of either the State, local, or federal government. State Responsibility Areas (SRAs) includes those areas where the financial responsibility of preventing and suppressing fires falls primarily on the State. Local Responsibility Areas (LRAs) include incorporated cities, unincorporated county areas, cultivated agriculture lands, and portions of the desert. LRA FHSZ are mapped as either Very High Fire Hazard Severity Zones (VHFHSZ) or as Non-VHFHSZs. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by

CALFIRE under contract to local governments (OSFM 2023). Federal Responsibility Areas (FRA) are those located on federal lands not otherwise included in SRAs and LRAs.

The Project would be located within the City of Santa Clara County in the County of Santa Clara. The Fire Hazard Severity Zones Map for Santa Clara County (OFSM 2022) indicates that the Project site is located in an LRA. The proposed Project is located in a fully urbanized developed area with no wildlands at or near the Project site. The Project site is serviced by the Santa Clara Fire Department. For more information on wildfire hazards, see Section 5.20 Wildfire.

5.9.1.8. 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.

5.9.1.9. 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.

- **Resource Conservation and Recovery Act.** The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the United States Environmental Protection Agency (U.S. 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, 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 the Hazardous and Solid Waste Act.
- **Comprehensive Environmental Response, Compensation, and Liability Act.** Congress enacted the federal CERCLA, including the Superfund program, 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. The National Contingency Plan provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Clean Water Act. The Clean Water Act (CWA) is the principal federal statute protecting navigable waters and adjoining shorelines from pollution. The law was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Since its enactment, the CWA has formed the foundation for regulations detailing specific requirements for pollution prevention and response measures. The U.S. EPA implements provisions of the CWA through a variety of regulations, including the NCP, as described above, and the Oil Pollution and Prevention Regulations. Implementation of the CWA is the responsibility of each state.

As part of the Clean Water Act, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation (Title 40 CFR Part 112), which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "navigable waters" of the United States. The rule specifies that proactive, and not passive, measures be used to respond to oil discharges.

National Pollutant Discharge Elimination System. The National Pollutant Discharge Elimination System (NPDES) permit program, created in 1972 by the CWA, helps address water pollution by regulating point sources that discharge pollutants to waters of the United States. The permit provides two levels of control: technology-based limits and water quality-based limits (if technology-based limits are not sufficient to provide protection of the water body). Under the CWA, U.S. EPA may authorize state, tribal, and territorial governments to administer the NPDES permit program, enabling them to perform many of the permitting, administrative, and enforcement aspects of the NPDES program. In states authorized to implement CWA programs, U.S. EPA retains oversight responsibilities. Within the State of California, the SWRCB issues both general permits and individual permits under the NPDES permit program.

Federal Aviation Administration. Title 14, Part 77.9 of the Code of Federal Regulations requires Federal Aviation Administration (FAA) notification for any construction or alteration of navigable airspace exceeding 200 feet above ground level (AGL). It also requires notification for construction or alterations within 20,000 feet of an airport with a runway more than 3,200 feet in length if the height of the

construction or alteration exceeds a slope of 100 to 1 extending outward and upward from the nearest point of the nearest runway of the airport. If a project's height exceeds 200 feet or exceeds the 100:1 surface, the Project applicant must submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

State

The California Fire Code. Chapter 12 of the CFC provides provisions related to the installation, operation and maintenance of energy systems used for generating or storing energy to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. Section 1207 of the 2022 CFC provides requirements for Electrical ESS and provides information on permits, construction, hazard mitigation, and operational requirements.

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

Santa Clara Fire Department Community Risk Reduction Division. Senate Bill 1082 (Health and Safety Code Chapter 6.11) established the Unified Program (a unified hazardous waste and hazardous materials management regulatory program). The Unified Program is implemented at the local level by local government agencies certified by Cal EPA, known as CUPA. CUPA agencies implement all the Unified Program elements and serve as a local contact for area businesses. The CUPA for the Project area is the Santa Clara Fire Department Community Risk Reduction Division (CRRD). As CUPA for City of Santa Clara, the CRRD administers the following California programs:

- Hazardous Waste Generator Program - This program applies to businesses and facilities that generate hazardous waste in any quantity, consolidates hazardous waste generated at a remote site, or recycles more than 100 kilograms/month of excluded or exempted recyclable materials. The Santa Clara Fire Department Hazardous Materials Division maintains records and conducts inspections of hazardous waste generators within the City of Santa Clara. Businesses that generate hazardous waste are required to submit a "Hazardous Waste Generator Permit Application" when they move into the city or begin generating hazardous waste. (A properly filled out and submitted Hazardous Waste Materials Business Plan may be used in lieu of the Hazardous Waste Generator Permit Application.)
- Onsite Hazardous Waste Treatment - The Santa Clara Fire Department Hazardous Materials Division maintains records and conducts inspections of hazardous waste generators who treat wastes on-site in a Fixed Treatment Unit under Permit by Rule, Conditional Authorization, and Conditional Exemption. The Division currently does not inspect Transportable Treatment Units, full permit facilities, or standardized permit facilities.
- Underground Storage Tank (UST) - SCCRRD implements this program to prevent discharges and releases of hazardous substances from USTs. The Santa Clara Fire Department Hazardous Materials Division maintains records of and inspects underground storage tanks. All underground storage tanks are required to meet current state regulations. Permits are required for the installation or removal of underground storage tanks.
- Aboveground Storage Tank SPCC Plan - As the Certified Unified Program Agency (CUPA) for the City of Santa Clara, the Santa Clara Fire Department Hazardous Materials Division is authorized to implement the California Aboveground Petroleum Storage Act. The Santa Clara Fire Department Hazardous Materials Division inspects facilities that store petroleum products in aboveground tanks with a total petroleum storage quantity at or above 1,320 gallons for compliance with the Aboveground Petroleum Storage Act and referenced sections of the federal Spill Prevention, Control, and Countermeasure (SPCC) rule.
- Hazardous Materials Business Plan (HMBP) - Facilities that store any hazardous material at or above the State-defined thresholds, generally 55 gallons of a liquid, 200 cubic feet of a gas, and 500 pounds of a solid, are subject to a HMBP. The CRRD oversees the preparation and submittal of the HMBP. The HMBP must be kept on site in a readily accessible area. The company must also review the HMBP at least once every two years. Copies of the inventory statement, site map, and facility information included in the HMBP must be submitted to the Santa Clara Fire Department annually.
- California Accidental Release Prevention Program - Businesses that handle more than the State threshold quantity of a regulated substance must develop a Risk Management Plan (RMP); an RMP is a

detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The Santa Clara Fire Department Hazardous Materials Division implements the California Accidental Release Prevention Program (CalARP) within the City of Santa Clara. The program requires an assessment of the offsite hazard potential, and the implementation of a program to minimize the risk of release. Companies which are required to prepare a Risk Management Plan for the Environmental Protection Agency pursuant 40 Code of Federal Regulations (CFR), Part 68, are also required to submit a copy of their Risk Management Plan to the Santa Clara Fire Department Hazardous Materials Division.

Santa Clara County Department of Environmental Health Hazardous Materials Compliance Division (HMCD). The HMCD administers the Site Mitigation Program which oversees the Local Oversight Program and the Site Cleanup Program. The Local Oversight Program (LOP) oversees the cleanup of sites contaminated by petroleum from UST releases throughout Santa Clara County. The Site Cleanup Program (SCP) oversees the cleanup of properties contaminated by hazardous materials not exclusively associated with petroleum USTs. California Health & Safety Code Sections 101480 through 101490 state that a responsible party for a contaminated site may request local agency oversight of site assessment and remediation activities. In addition, the HMCD administers the Hazardous Materials Storage Ordinance (County Ordinance No. NS-517.31) and the Toxic Gas Ordinance (County Ordinance No. NS-517.44).

Santa Clara Emergency Operations Plan. In June 2016, the City of Santa Clara adopted an Emergency Operations Plan (EOP) to address the planned response of the City of Santa Clara to emergency situations associated with natural disasters and technological incidents, as well as chemical, biological, radiological, nuclear and explosive emergencies. The EOP establishes the emergency organization, assign tasks, specifies policies and general procedures, and provides for coordination of planning efforts for emergency events such as earthquake, flooding, dam failure, and hazardous materials responses.

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.

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, however historic groundwater contamination has occurred at the site and at upgradient sites (SWRCB, 2023b though f). In the event that soils, or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed/encountered during site grading or excavation activities or dewatering activities, the excavated soil and/or extracted groundwater shall be tested and, if contaminated above hazardous waste levels, shall be contained and either treated or disposed of at a licensed waste facility. The presence of known or suspected contaminated soil or groundwater 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.

LESS THAN SIGNIFICANT IMPACT – OPERATION AND MAINTENANCE. 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.

The Project would include operation of a BESS. The BESS would be designed, constructed, operated and maintained in accordance with applicable industry best practices and regulatory requirements, including fire safety standards. The BESS would comply with the current California Fire Code (CFC), which governs the code requirements to minimize the risk of fire and life safety hazards specific to battery energy storage systems used for load shedding, load sharing, and other grid services (Chapter 12 Section 1206 of the 2019 CFC). If applicable, the system would be certified to UL 9540, the standard associated with control, protection, power conversion, communication, controlling the system environment, air, fire detection and suppression system related to the functioning of the energy storage system. The batteries would be tested to UL 9540A, a test method intended to document the fire characteristics associated with thermal event or fire and would confirm that the system would self-extinguish without active fire-fighting measures. The system would be designed, such that, during a fire event, the results of the UL 9540A test would show that any internal fire is contained within the enclosure and not spread to the other parts of the facility. The results of this test are used to inform facility safety system design and emergency response plans which would be shared with first responders. The BESS would use dry agent fire suppressant-system to detect and suppress fires. If smoke or heat were detected, or if the system were manually triggered, an alarm would sound, horn strobes would flash, and the system would release suppressant, typically FM 200, NOVEC 1230 or similar agent from pressurized storage cylinders. Final safety design would follow applicable standards and would be specific to the technology chosen. Compliance with applicable regulations, guidelines, and standards would reduce the potential for fire related damage to the BESS that may release hazardous materials from damaged batteries to less than significant.

Mitigation Measure for Accidental Release of Hazardous Materials

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

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

NO IMPACT. The proposed Project site is not located 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. Therefore, there would be no impact to schools related to hazardous materials use.

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?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED -– CONSTRUCTION. The proposed Project site is not located on or adjacent to any active hazardous materials sites as identified pursuant to Government Code Section 65962.5; therefore, no significant hazard the public or the environment would be created. However, the Project would be located on the northern portion of a larger parcel on which the southern portion had a former LUST case that is now case closed. As well, several active Cleanup Program sites are located upgradient of the Project site that may have resulted in groundwater contamination at the Project site. Unknown soil or groundwater contamination could be encountered during Project grading and excavation activities.

Contaminated soil or groundwater encountered during construction and considered to be hazardous by the State of California would be handled, stored, transported and disposed of according to applicable federal, State, and local regulations, as described above under applicable Regulations. Implementation of mitigation measure MM HM-1 (Hazardous Substance Control and Emergency Response) would reduce potential impacts associated with encountering unknown hazardous soil or groundwater ensuring that Project construction would not create a significant hazard to the public or the environment through the encountering contaminated soil or groundwater at or near current and former hazardous materials sites. Further, SVP would also implement its existing hazardous substance control and emergency response procedures.

Pre-construction activities for the Project include removal of the existing building which is over 50 years old and may contain ACM or LBP on or with its building materials. Demolition of the existing building on the Project site could expose construction workers or residents in the vicinity of the Project site to harmful levels of ACMs or LBP. Compliance with appropriate federal, State, and local regulations regarding the handling, storage, removal, and disposal of ACM and LBP would reduce potential impacts. Implementation of mitigation measure HM-2 (Asbestos and Lead Based Paint Testing and Removal) would ensure that ACM and LBP are identified and properly removed/remediated prior to building demolition resulting in a less than significant impact to worker or the public related to ACM or LBP exposure.

Mitigation Measures for Unknown Contamination

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

MM HM-2 **Asbestos and Lead Based Paint Testing and Removal.** The Project would implement the following measures to reduce impacts due to the presence of unknown ACMs and/or LBP in the structure to be demolished:

- In conformance with State and local laws, a visual inspection/predemolition survey, and sampling and testing, shall be conducted prior to the demolition of the on-site

building to determine the presence of asbestos-containing materials and/or lead-based paint, and to determine appropriate handling and disposal requirements.

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

NO IMPACT – OPERATION AND MAINTENANCE. The Proposed Project will not use large quantities of hazardous materials or acutely hazardous materials and is therefore unlikely to be identified during operation on a list of active hazardous materials sites compiled pursuant to Government Code Section 65962.5; 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?

LESS THAN SIGNIFICANT IMPACT. The Norman Y. Mineta San Jose International Airport (Airport) is located approximately 0.5 miles east of the Project site. The Project site is: beneath a mapped flight path; located between the 65 dB and 70 dB Aircraft Noise Contours; located between the 162 fand 212 feet above Mean Sea Level FAR Part 77 Surface zone of maximum structure height; and at the northwestern edge of the designated Airport Turning Safety Zone (TSZ) and within the Traffic Pattern Zone (TPZ) for the Airport (SCCALUC, 2016). However, the Project would not include on-site staff that would be at increased hazards due aviation hazards nor would the Project structures be of greater size or height than existing industrial or commercial buildings around the site. The height of the BESS structures and tie line would not be tall enough to exceed FAR Part 77 Surface zone of maximum structure height. Therefore, there would be a less than significant impact due to aviation hazards from the Project.

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 16-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 5.17.2 (Transportation) for complete text of the mitigation measure.]

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 - CONSTRUCTION. 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 Project site and surrounding areas are located in an LRA area and are not in mapped VHFHSZ as designated on CAL FIRE wildland fire hazard maps (OSFM, 2022). To reduce the potential of construction triggered fires, fire protection during construction would include minimizing flammable materials in the BESS yard, such as vegetation and fire extinguishers and other portable fire-fighting equipment would be available onsite. Locations of portable fire extinguishers would include, but not be limited to hot work areas, flammable storage areas, and mobile equipment such as work trucks and other construction vehicles. Fire-fighting equipment would be marked conspicuously and be accessible. Portable equipment would be routinely inspected, as required by local and federal laws, ordinances, regulations, and standards, and replaced immediately if defective or needing charge. Therefore, the Project construction would have no direct or indirect impacts related to exposure of people or workers to wildland fires (see also Section 5.20, Wildfire).

LESS THAN SIGNIFICANT IMPACT – OPERATION AND MAINTENANCE. Operation and maintenance activities would be incorporated into SVP's and Ameresco's existing O&M schedule for the existing substations and associated facilities. As with current operation and maintenance, SVP and Ameresco would comply with all current federal and State laws related to vegetation clearance and fire prevention. Additionally, fire prevention for the BESS will comply with federal and State laws, including the CFC. Thermal runway or other system failures could lead to fire or explosion of the BESS. In order to minimize hazards related to fire and explosion, the BESS would be equipped with a dry agent fire suppression system, and if smoke or heat were to be detected, or if the system were manually triggered, an alarm

would sound, horn strobes would flash, and the system would release suppressant, typically FM-200, NOVEC 1230 or a similar clean agent from pressurized storage cylinders. The local Fire Department would be notified. The battery enclosure and the site installation design are all required to be approved by the State Fire Marshal. Therefore, the Project construction would have a less than significant direct or indirect impacts related to exposure of people or workers to wildland fires (see also Section 5.20, Wildfire).

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

5.10.1.1. Surface Waters and Drainage

Surface water drainage in the City of Santa Clara is primarily to the Guadalupe River (east of the Project site); San Tomas Aquino Creek, also sometimes mapped as the southern extension of Saratoga Creek; (west of the Project site); Saratoga Creek (southwest of the Project site), and Calabazas Creek (west of the Project site) (City of Santa Clara, 2010). The Project site is located approximately equidistantly between San Thomas Aquino Creek to the west and Guadalupe River to the east. The Project site drains to the San Thomas Aquinas Creek within the San Jose International Airport-Frontal San Francisco Bay Estuaries Watershed. Saratoga Creek (and San Tomas Aquino 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, 2023).

All of the streams and rivers crossing the City of Santa Clara 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 storm sewers beneath City's roadways. The stormwater is transported through the underground pipe to the 4 streams within the City. These streams then directly flow into the San Francisco Bay (City of Santa Clara, 2010).

5.10.1.2. 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 north-central section of the City of Santa Clara, is within the Santa Clara Subbasin (DWR, 2023). 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, 2010).

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, 2010). 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).

5.10.1.3. Flood Hazard Areas

On Federal Emergency Management Agency (FEMA) flood maps (FEMA,2009), the Project site is primarily mapped as Zone X - Area with Reduced Flood Risk due to Levee, however there is a small area mapped as Special Flood Hazard Zone AH subject to the 1% annual flood (i.e., the 100-year flood) running approximately along Raymond Street and the east end of Space Park Dr adjacent to the Project site and potentially lapping over onto the west edge of the Project site. The substation site is outside of this zone. Special Flood Hazard Zone AH has base flood elevations determined and estimated flood depth of 1 to 3 feet (usually areas of ponding) (FEMA, 2023).

According to the City of Santa Clara General Plan from 2010, Figure 5.10-2, the proposed Project site is within the Lexington Dam inundation areas and is immediately adjacent to a small Special Flood Hazard Area, as identified above as Zone AH, however the Project site is not vulnerable to sea level rise.

5.10.1.4. 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, 2010).

5.10.1.5. 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. There are no watercourses or other water bodies within or adjacent to the Project site. Drainage from the site is directed to the municipal storm drain system which likely flows to San Thomas Aquinas Creek and then eventually flows into San Francisco Bay. The City of Santa Clara participates in the regional program for the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). Santa Clara is committed to improving water quality in the Bay and streams reducing urban runoff pollution through the implementation of the City's Urban Runoff Management Plan (URMP). The City's URMP, along with other local Urban Runoff Management Plans, collectively constitute the regional plan that conforms to the federal requirements of the National Pollution Discharge Elimination System (City of Santa Clara, 2010).

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 5.9, 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. Water would be supplied from existing hydrants and/or trucked to the site. During BESS operation, little water would be required. A water truck or hose will be used on-site to support dust suppression during ground disturbing work and to supply water to construction activities. 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 16-month duration of construction activities. Due to very shallow groundwater levels, dewatering may be necessary if groundwater is encountered. However, 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 mostly impervious due to the presence of a building and significant paving. The proposed Project would also include mostly impervious or semipervious surfaces. The 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 some planting areas with exposed soil. The Project would regrade the site and pave it. This would result in slightly more impervious ground cover compared to existing conditions. There would be only a slight change 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 primarily with impervious surfaces except for a few planting beds with trees and exposed soil. The Project would pave the site. This would have a less than significant impact on drainage patterns or runoff generation. The site would drain to the existing stormwater drainage system, similar to existing practice. 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. 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 western edge of the Project is adjacent to and just barely within a FEMA-designated Special Flood Hazard Area (Zone AH, a 100-yer flood zone with estimated flood depth of 1 to 3 feet). Construction of a wall along the north and west side of the Project site would be primarily within Zone X - Area with Reduced Flood Risk due to Levee 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 an area of reduced flooding due to levee (Zone X) and adjacent to a 100-year flood zone with estimate depth of flooding of 1 to 3 feet. The BESS system components would all be located within the mapped Zone X area of reduced flooding due to levee 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 ground-water 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 the nearby San Tomas Aquinio/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 would have minimal water use, mainly during construction, which would 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 central east part of the City of Santa Clara. The proposed Project area and parcels to the north, west, and south are zoned as ML – Light Industrial, and the parcel to the east of the Project area is zoned as Public/Quasi Public. (City of Santa Clara 2014, Figure 5.2-2). The land use in the area is primarily a mix of light industrial and low intensity office/R&D, which includes data centers.

The Light Industrial classification is intended to accommodate a range of light industrial uses, including general service, warehousing, storage, distribution, and manufacturing. It includes flexible space, such as buildings that allow combinations of single and multiple users, warehouses, mini-storage, wholesale, bulk retail, gas stations, data centers, indoor auto-related uses and other uses that require large, warehouse-style buildings. Because uses in this designation may be noxious or include hazardous materials, places of assembly, such as religious institutions and schools, and uses catering to sensitive receptors, such as children and the elderly, as well as entertainment uses such as clubs, theaters, and sports venues south of U.S. Highway 101, are prohibited.

Low Intensity Office/R&D designations are intended for campus-like office development that includes office and R&D, as well as free standing data centers. It includes landscaped areas for employee activities and parking that may be surface, structured or below-grade. Accessory, or secondary, small scale supporting retail uses that serve local employees and visitors are also permitted.

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, 2014)

5.11.1.1. 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 policies in the General Plan are generally related to the proposed Project (City of Santa Clara, 2014):

- **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 replace-

ment 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 Project would be within an existing SVP property. The site is located off a lightly travelled surface street. The closest residential community to the Project is approximately 0.5 miles to the northeast. The Project would not physically divide an established community. Impacts would be less than significant, 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 5.13, 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 existing building on the site would be demolished prior to construction, after Ameresco obtains a Demolition Permit from the City of Santa Clara. The removal of the existing 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.

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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, 2023a; USGS, 2023).

5.12.1.1. 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, 2023b). 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 ground-borne 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

5.13.1.1. 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 commercial and industrial. The major arteries, such as Central Expressway and U.S. 101 near the Project site, cause traffic noise levels that exceed 75 dBA CNEL along the edges of the roads, and noise levels that exceed 70 dBA CNEL at the Project site (City of Santa Clara, 2014; General Plan Figure 5.10-4). The Project site is also within the 65 dB CNEL airport noise contour (City of Santa Clara, 2014; General Plan Figure 5.10-5).

Noise Sensitive Areas. The area immediately around the Project includes heavy industrial, light industrial, and low intensity office/R&D designated areas. The closest residential community to the Project is approximately 0.55 miles to the northeast. This community is designated as a very low-density residential area. There is another residential community located approximately 0.9 miles to the west, which is designated as a high-density residential area. There are no residences, churches, or schools within 0.5 miles of the Project site. Project-related work areas would not be within 100 feet of land uses containing sensitive receptors, since there are no sensitive receptors within 100 feet.

5.13.1.2. 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).

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 16-month duration of construction activities that include mobilizing construction equipment, crews, and materials, grading, excavating holes for poles, installing concrete foundations, paving, and installing poles and equipment. The construction activities would require use of vehicles and heavy-duty equipment capable of generating noise within and around the Project 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 demolition and construction-related debris, and workers commuting to and from the work site.

For the Project site, which is zoned as ML-Light Industrial, construction noise would be allowed at any time (Chapter 9.10.040).

Construction would temporarily increase the noise levels near the Project 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 land uses surrounding the site are primarily commercial and industrial. There are no residences within 0.5 miles of the Project site.

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

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

Equipment	Typical Lmax (dBA, at 50 ft)	Typical Leq (dBA, at 50 ft)
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 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 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 Raymond Street entrance to the substation.

Construction noise would affect the locations closest to the Project site 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 and there are no residences within 0.5 miles. 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.

Ameresco would take routine precautions to avoid creating unnecessary noise. Construction traffic and material delivery would not need to be routed near residential areas, due to the distance of the site from the nearest sensitive receptors. 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. 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 construct and operate a BESS facility and 60 kV interconnection line. There are no existing noise sources

onsite. Components of the Project that could create noise include HVAC units and power transformers. Additionally, a ten-foot high CMU wall is proposed around part of the Project, which is consistent with the City's General Plan policies for noise generating land uses (Policy 5.10.6-P4 and Policy 5.10.6-P5). The Project would be over 0.5 miles from the nearest residential community and sensitive receptor. Therefore, 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 work area. 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). There are no residents within 25 feet of the Project. 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 0.5 miles west of the San Jose International Airport and 5.26 miles southeast of Moffett Field. The Project site is within the 65 dB CNEL airport noise contour for the San Jose Airport (City of Santa Clara, 2014; General Plan Figure 5.10-5). However, the proposed Project would be unstaffed, and the Project would not expose people to noise from the airports. The Project would be within 2 miles of the San Jose International Airport and is within the Airport Influence Area, as defined in the Airport Land Use Plan (County of Santa Clara 2016). The airport land use plan states that all areas within the Airport Influence Area are susceptible to aircraft overflights, but this is primarily relevant to residential land uses. However, since the Project would be unmanned and is not within or near residential land uses, the 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 is surrounded by a mix of commercial and industrial land uses. 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***	**Unemployment Rate**
City of Santa Clara	130,172	52,000	6.9%	74,000	2.1%
County Santa Clara	1,894,781	696,489	5.0%	1,055,200	2.4%

*Accounts for population greater than 16 years of age and in Labor Force.
Source: CA DOF, 2022; CA EDD, 2022

5.14.1.1. 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 or Ameresco workforce to service and maintain the BESS facility. Ameresco is expected to provide staffing for the Project. During the 16-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 BESS facility would facilitate future planned growth by ensuring reliable electricity to the area served by SVP 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 SVP property and would not displace any housing or people and, therefore, would not necessitate the construction of replacement housing. Construction of the BESS facility would occur over approximately 16 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.

5.15.1.1. 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 2, located 0.6 miles southwest of the Project site, at 1900 Walsh Ave. The current SCFD response time standard is a three-minute average for all areas of the City (City of Santa Clara, 2014).

5.15.1.2. 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 1.8 miles southeast of the Project site. SCPD has 232 full-time employees, including 153 sworn officers and 79 civilians (City of Santa Clara, 2022), divided into 4 divisions (City of Santa Clara, 2019). The average response time after dispatch is 2 minutes and 59 seconds (City of Santa Clara, 2022).

5.15.1.3. 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. There are no schools 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:

- Montague Elementary School, 750 Laurie Ave, 0.9 miles northeast
- Scott Lane Elementary School, 1925 Scott Boulevard, 1.3 miles south
- Don Callejon Middle School, 4176 Lick Mill Boulevard, 1.5 miles northeast

5.15.1.4. Parks

There are 40 parks and pools in the City of Santa Clara (City of Santa Clara, 2023). The parks nearest the Project are:

- Montague Park, 3595 MacGregor Lane, 0.8 miles northeast
- Montague Swim Center, 3750 De La Cruz Boulevard, 1 mile northeast
- San Tomas Aquino/San Tomas Creek Trail, 0.9 miles west

5.15.1.5. Hospitals

The following hospitals are closest to the substation site:

- O'Connor Hospital, 2105 Forest Avenue, San Jose, 3.4 miles south
- Valley Health Center Sunnyvale, 660 S Fair Oaks Avenue, Sunnyvale, 4 miles west
- Kaiser Permanente Santa Clara Medical Center, 700 Lawrence Expressway, 3.8 miles southwest

5.15.1.6. 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 proposed Project would not require fire protection services during construction or operation and maintenance unless there were an emergency. The Project site would be served by the Santa Clara Fire Department (SCFD), which maintains a three-minute response time for all areas of the City. The BESS would be equipped with a dry agent fire suppression system, the design of which follow applicable standards and would be specific to the battery technology chosen, including, but not limited to, National Fire Protection Association 855 (standard for the Installation of Stationary Energy Storage Systems) and Section 1206 of the California Fire Code. The construction and operation of the proposed Project would not result in a need for additional fire protection facilities or affect response times or other service performance. The result would be a less than significant impact.

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?

LESS THAN SIGNIFICANT. The proposed Project would not be expected to result in an increase in population within the area. Construction of the Project would occur over approximately 16 months and would not require the relocation of workers' families to the City of Santa Clara. An increase in families or in school-age children would not be expected as a result of the temporary construction activities and any workers who might temporarily migrate to the area. After construction, Ameresco's existing operations and maintenance division would assign two team members who would assume inspection, patrol, and maintenance duties as needed. There would be no additional workers as a result of this Project. Therefore, the Project would not increase the population in a way that would cause the need for expanded schools. The result would be a less than significant impact.

d. Parks?

NO IMPACT. The proposed Project would not increase the region's population. Construction of the Project would take place over 16 months and would require only a small construction workforce 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, 2023). Three parks are located within approximately one mile of the Project:

- Montague Park, 3595 MacGregor Lane, 0.8 miles northeast
- Montague Swim Center, 3750 De La Cruz Boulevard, 1 mile northeast
- San Tomas Aquino/San Tomas Creek Trail, 0.9 miles west

The closest residents live approximately 0.5 miles from the Project. 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, 2014). According to Figure 5.7-4 in the General Plan, the Project area is not in a location that is within walking distance to any existing or planned future parks, recreation, or open space locations (City of Santa Clara General Plan).

5.16.1.1. 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, 2014):

- **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 increase the demand for parks. The Project would remove an existing unused building, and use the site for a BESS within an SVP property. Construction would take place over 16 months and would require only a small workforce 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.

5.17.1.1. Highways

Highway U.S. 101 provides regional access to the Project vicinity (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 (4 lanes per direction) divided south-north highway that travels the length of the West Coast. U.S. 101 is located 0.15 miles north of the Project site. The Trimble Road/De La Cruz Boulevard exit or the San Tomas Expressway/Montague Expressway exit would likely be used to access the Project area. At the Trimble Road/De La Cruz Boulevard exit, the year 2020 average daily traffic (ADT) volumes on U.S. 101 were 160,000 vehicles per day. At the San Tomas Expressway/Montague Expressway exit the year 2020 average daily traffic (ADT) volumes on U.S. 101 were 169,000 vehicles per day (Caltrans, 2020). Year 2020 ADT volumes represent the most recently published data.

5.17.1.2. Local Roads

The Project is directly accessed from Raymond Street, a two-lane local surface road with a 25-mph speed limit. Raymond Street turns into Space Park Drive as the street turns from north/south to east/west. Space Park Drive is also a two-lane street with a 25-mph speed limit. Space Park Drive continues to the west and connects to Scott Boulevard. The north end of Raymond Street intersects with Duane Avenue, a two-lane street with a 35-mph speed limit, which interconnects with Lafayette Street to the east.

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 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
U.S. 101 – De La Cruz to Montague Expressway	8	240,100
De La Cruz Boulevard between U.S. 101-Central Expressway (highway exit to access project)	6	55,990
Central Expressway between Scott Boulevard and Lafayette Street	8	47,550
Lafayette Street between U.S. 101-Central Expressway	6	18,190
San Tomas Expressway between U.S. 101-Scott Boulevard	10	66,510
Scott Boulevard between San Tomas Expressway-Central Expressway	2	16,160

Source: City of Santa Clara, 2011.

Local travel routes used to access the Project include Expressways and Minor and Major Arterial Streets. The San Tomas, Montague, and Central Expressways could be used to access the Project vicinity. Expressways are typically designed to serve regional traffic with speeds of 45 miles per hour and limited access. These facilities are under the jurisdiction of Santa Clara County and include transit service and stops. Wide shoulders or parallel routes are generally provided.

The Major and Minor Arterial Streets that would be used to access the Project include Scott Boulevard and Lafayette Street. These primarily serve through traffic not served by expressways or freeways, and typically include transit vehicles. These streets have travel speeds between 35 and 45 miles per hour. Transit service is also emphasized, particularly on major arterials.

Roadways Disrupted by Project Construction

Construction of the proposed Project could result in a temporary disruption to local roadways during delivery of large equipment or materials. The main roads that may require temporary lane closures and/or escort vehicles include San Tomas Expressway, Scott Boulevard, De La Cruz Boulevard, and Central Expressway, a combination of which could be used to access the smaller local roads, Duane Avenue, Space Park Drive, and Raymond Street, which are used to access the Project area.

5.17.1.3. 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 route number 59 is located near the Project, with two bus stops within approximately one-half miles (VTA, 2023, 2021).

- Route 59 travels on Scott Boulevard, east of the Project site. The following two bus stops are near the Project and could be affected:
  - North of the intersection of Scott Boulevard and Space Park Drive.
  - South of the intersection of Scott Boulevard and Central Expressway.

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 1.86 miles southeast 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 2.25 miles north of the Project site, and provides transit services from Sacramento to San Jose.

5.17.1.4. 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. A portion of the Caltrain ROW passes approximately 0.25 miles east and approximately 1.2 miles south of the Project site. The rail network includes grade-separated and at-grade railroad crossings. (City of Santa Clara, 2014)

5.17.1.5. 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 intermediate bike lane is located along Scott Boulevard. Central Expressway is an undesignated, advanced rated street for bicycles (City of Santa Clara, 2013). Lafayette Street is identified as a "high caution" route for bicycles (VTA, 2020).

5.17.1.6. 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 0.5 miles east of the proposed Project site. A private heliport, McCandless heliport is located approximately 1.3 miles northwest of the proposed Project area.

5.17.1.7. 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 the circulation system 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 bicycle facilities near the proposed Project would not be affected except during occasional land closures, if needed. 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 and Ameresco's respective existing maintenance and operations groups would assume inspection and maintenance duties as needed on their respective parts of the Project. 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.

5.17.2.1. Mitigation Measures for Transportation Impacts

MM T-1 **Construction Traffic Control Plan.** Prior to the start of construction, Ameresco 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. Ameresco 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 Ameresco 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 16 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 during construction 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 through 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 construction-related 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. The Project would be unmanned, but the proposed Project would require routine inspection and periodic maintenance visits by existing SVP and Ameresco 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. The Project would not create a new access point but would use existing driveways to the site. These driveways provide ingress and egress at a low speed (25 mph) roadway. 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 not increase transportation hazards or be an incompatible use for the site. The Project is similar in function to the existing site and similar ingress and egress would be provided. 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.

5.17.2.2. 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 were 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 to 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.

5.17.2.3. 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.

5.18.1.1. 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.

5.18.1.2. 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.

5.18.1.3. 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).

5.18.1.4. AB 52 Tribal Consultation

The proposed Project's effects on potentially buried and therefore presently unidentified TCRs were 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 proposed Project and invited to engage in consultation. The invitation was extended to each representative by registered mail (February 28, 2023).

No responses were received to the emails or letters during the 30-day response period. This concluded AB 52 compliance under CEQA.

5.18.1.5. Sacred Lands File Search

Aspen requested a search of the NAHC's Sacred Lands file to determine the presence or likelihood of encountering TCRs within the Project area. On December 8, 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 area. 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.

5.18.2.1. 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.

5.18.2.2. 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 5.19-1 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

5.19.1.1. 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, 2021).

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).

5.19.1.2. 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, 2023).

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	16,400,000	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, 2023a; CalRecycle, 2023b; CalRecycle, 2023c

5.19.1.3. 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 BESS facility and removal of an existing SVP building. 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. The Project would require protection and control panel upgrades or reconfigurations at the Kenneth and Oaks Junction Substations. These upgrades would not expand any existing facilities or require additional facilities. During routine operation and maintenance of the proposed Project, the Project 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 or hose 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 the Project. The Project would contribute to the stability of the City's power grid, by storing energy. 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. 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 or existing hydrants would provide water for dust control as needed. Construction of the Project would include the installation of two new fire hydrants on site. These hydrants would be used

during operation for fire suppression, in case of an emergency. Upon completion, the proposed Project would not generate any demand for water, unless there was a fire. 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.

The building that is currently on site would be demolished under a ministerial permit from the City of Santa Clara as part of the Project. The waste from this would be transported 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).

5.20.1.1. 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 pro5.20-2action 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 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 16-month construction period to accommodate delivery of oversized equipment such as BESS enclosures 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 of limited duration. Traffic control protocols and a project-specific traffic plan would be implemented 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. Therefore, maintenance of the proposed Project would not substantially impair an emergency response plan or emergency evacuation plan.

5.20.2.1. 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. There are no residences in the vicinity of the Project. The closest residential community is located approximately 0.5 miles from the Project site.

At Project completion, the site would be devoid of vegetation, paved, and surrounded by a ten-foot concrete block wall and a chain link fence. 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 fire suppression equipment (e.g., extinguishers) would be on site. 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. Both components of the Project, electrical lines and BESS facilities, can start a fire. 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. The Project would install new electrical equipment, which would comply with all current federal and State laws related to vegetation clearance and fire prevention, so as to not exacerbate wildfire risks.

Ameresco would operate and maintain the BESS, which would be designed with a safety system and in accordance with applicable laws, codes, and standards. The system would be designed so that during a fire event, any internal fire is contained within the affected BESS enclosure and would not spread to the other parts of the facility. The batteries would be tested to UL 9540A, a test method intended to document the fire characteristics associated with thermal event or fire and would confirm that the system will self-extinguish without active fire-fighting measures. The results of this test are used to inform facility safety system design and emergency response plans which would be shared with first responders. 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 a new 60 kV power line, approximately 300 feet long, as well as a BESS facility. The Project site is in an urban setting and activities associated with the proposed Project would generally occur within the Project boundaries, and would rely on existing paved roads for access. No fuel breaks would be required. Two on-site fire hydrants, which would be used for emergency water sources, are included as part of the Project. The two new fire hydrants will not exacerbate fire risks and would contribute to reducing the fire risk for the Project and surrounding area. The new 60 kV transmission line would not be within any wildfire risk area.

Once the BESS is energized and interconnected, Ameresco's maintenance and operations group would assume inspection and maintenance duties. Ameresco 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. During operation and maintenance, Ameresco 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

5.21.1.1. 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 Proposed Project includes a new 60 kV line, and the distribution lines that are a part of the BESS facility would be low and medium voltage. 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 within the BESS facility, 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.

5.21.1.2. 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 central eastern area of the City of Santa Clara. This Project site is in a highly urbanized area. Vegetation at the site is sparse and all the trees and vegetation on site would be removed. 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-2 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.)

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.

Three planned projects were identified within 0.25 miles of the KRS BESS site. The projects were reviewed to identify whether the Project could contribute to cumulatively significant impacts when evaluated in combination with these projects. The projects were identified from the Planning Department's current project list. These are considered potential cumulative projects whose impacts could combine with those of the KRS BESS Project. They are:

- Lafayette/Bassett Bicycle Lanes Project (Central Expressway to Agnew)
- 960 Central Expressway Project (demolish the existing structures and site improvements to construct three Class "A" speculative buildings totaling up to 890,000 square feet for warehousing and/or data center uses, associated parking, on- and off-site improvements and landscaping)
- 3060 Raymond Street Project (Use Permit to convert a 24,422 s.f. industrial building to a data center with installation of five (5) 2,000 kW backup generators, six (6) cooling towers, equipment yards and on- and off-site improvements)

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 KRS BESS Project are considered by issue area below. While actual construction periods often vary from those initially anticipated, it does not appear that the three identified projects would overlap with the anticipated 2023 beginning of construction at the KRS BESS site. However, applications for other unknown projects may occur and may overlap with the KRS BESS 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 KRS BESS 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 KRS BESS. 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 ambient air quality standards. Foundation excavation and other construction-related activities could potentially expose sensitive receptors to construction-related emissions, including emissions of fugitive dust and DPM, which could 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 the 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 KRS BESS would less than significant, 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. The objectives of the proposed Project are to increase the reliability and flexibility of SVPs electrical grid and to help solve California's "duck curve" power production problem. The proposed Project would achieve these objectives by utilizing the BESS to store energy. Equipment used during construction would comply with mandated efficiency standards, and there would be no wasteful, inefficient, or unnecessary consumption of energy resources. The operation and maintenance activities would be minimal and would not involve wasteful, inefficient, or unnecessary consumption or use of energy resources.

The energy being stored by the BESS would be delivered to the BESS from the mix of renewable and fossil fuel powered generation resources available at the time of charging. This energy would be discharged during periods of high demand, when fossil fuel resources are most likely to be called upon. As a result, the energy discharged by the BESS would be likely to displace the use of fossil fuel resources during periods of high demand. The proposed Project would not conflict with any state or local plan for prioritizing renewable energy or energy efficiency, and 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 Kifer BESS Project 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), which would ensure that Project design would reduce the potential for geologic and seismic hazards, such as liquefaction and 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-2 (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. Because the direct environmental effect of GHG emissions is to influence global climate change, GHG emissions are by their nature inherently a cumulative concern with a cumulatively global scope. Project-specific GHG emissions would occur from the burning of fuels required by construction equipment and vehicles 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 16 months. These estimated levels would not exceed the threshold level of 25,000 metric tons per year for annual mandatory reporting of GHGs.

GHG emissions from operation and maintenance would be minimal, as the KRS BESS would require only infrequent maintenance. The minor quantity of GHG emissions created during construction and for operation and maintenance would not be a cumulatively considerable impact.

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 is covered primarily with impervious surfaces. The proposed Project would require minimal water for dust control and concrete during construction. Dewatering during foundation excavation for poles 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 construct a compatible use within an existing utility-owned 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 office buildings, but construction would be limited to daytime hours and would be short-term. There are no sensitive receptors within one half mile of the Project. 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 KRS BESS 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 KRS BESS 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 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 and flexible electricity grid in 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 KRS BESS Project 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 KRS BESS 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; 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, 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 KRS BESS Project would not require extensive water consumption, as stated in Section 5.19. Therefore, a less than significant contribution to cumulative impacts to utilities and service systems would occur.

Corona and Induced Current Effects. None of the planned or current projects in the vicinity of the proposed Project would be sensitive to corona or induced current effects. The proposed Project will not contribute to a cumulative impact to corona and induced current effects.

c. 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 similar to current operation and maintenance practices for similar facilities, which have minimal impacts on human beings. The potential beneficial effects of the Project include improving the reliability and flexibility 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 bio-logical monitor shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, permit con-	Monitor implementation of specified biological monitor activities	Prior to and during construction

Table 6-1. Mitigation Monitoring Plan

	ditions, or other Project requirements, or will have an unauthorized adverse effect on biological resources.		
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. During the nesting season (February 1 to August 31), preconstruction nesting bird surveys shall be conducted on the site and vicinity by a qualified biologist no more than 7 days before any work activities are performed. A Preconstruction nesting bird survey shall also 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	Review and attend worker environmental awareness program; Monitor implementation of unanticipated discovery protocols	Prior to construction and during construction

Table 6-1. Mitigation Monitoring Plan

	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.		
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.	Monitor implementation of human remain discovery protocols	During construction

Table 6-1. Mitigation Monitoring Plan

	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			
Geologic and Seismic Hazards	**MM G-1.** Conduct Geotechnical Investigations. Because seismically induced liquefaction-related ground failure has the potential to damage or destroy Project components, design-level geotechnical investigation for the Project shall be performed by SVP and shall include investigations designed to assess the potential for geologic and seismic hazards, and specifically include evaluation of potential for liquefaction and expansive soils to affect the BESS system components and the 60 kV line at the Project site. Where liquefaction or expansive soils 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. Finalized Project design incorporating geotechnical recommendations shall be submitted to the City 60 days prior to Project construction.	Ensure a design-level geotechnical investigation is performed	At least 60 days before final Project design
Unanticipated Discoveries of Paleontological Resources	**MM G-2.** Worker Training and Management of Paleontological Resources. 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. The qualified professional paleontologist shall prepare a Paleontological Worker Environmental Awareness Program (WEAP), and training shall be provided for all staff who will be onsite during excavations. The WEAP shall show what local Pleistocene fossils look like in general, where they may appear in the Project, and how to proceed should material suspected to be a fossil is encountered. The qualified paleontologist must develop and implement a Paleontological Resources Management Plan (PRMP) for the Project area that meets the	Review Paleontological Resource Monitoring Program; Monitor implementation of Program	Prior to construction and during construction

Table 6-1. Mitigation Monitoring Plan

	standards set forth by the Society of Vertebrate Paleontology (2010). This PRMP shall include: ▪ A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. The Paleontologist shall determine a suitable monitoring schedule based on construction activities and anticipated depth of ground disturbance. 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, however historic groundwater contamination has occurred at the site and at upgradient sites (SWRCB, 2023b though f). In the event that soils, or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed/encountered during site grading or excavation activ-	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

	ities or dewatering activities, the excavated soil and/or extracted groundwater shall be tested and, if contaminated above hazardous waste levels, shall be contained and either treated or disposed of at a licensed waste facility. The presence of known or suspected contaminated soil or groundwater 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.		
Asbestos and Lead Testing and Removal	**MM HM-2.** Asbestos and Lead Based Paint Testing and Removal. The Project would implement the following measures to reduce impacts due to the presence of unknown ACMs and/or LBP in the structure to be demolished: ▪ In conformance with State and local laws, a visual inspection/predemolition survey, and sampling and testing, shall be conducted prior to the demolition of the on-site building to determine the presence of asbestos-containing materials and/or lead-based paint, and to determine appropriate handling and disposal requirements. ▪ Prior to demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations (CCR) 1523.1. Employee	Sample and test the on-site building. if asbestos and/or lead is discovered, ensure that demolition activities are conducted according to the outlined procedures.	Prior to construction and during demolition

Table 6-1. Mitigation Monitoring Plan

	training, employee air monitoring, and dust control shall be conducted during demolition also in accordance with this Standard. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed. ▪ All potentially friable ACMs shall be removed in accordance with NESGAP guidelines prior to any building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos. ▪ A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above. ▪ Materials containing more than one percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.		
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	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 6-1. Mitigation Monitoring Plan

	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.		
Traffic/Transportation			
Traffic Control	**MM T-1.** Construction Traffic Control Plan. Prior to the start of construction, Ameresco 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. Ameresco 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 Ameresco 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 Ameresco and approved by the City of Santa Clara	Prior to construction

Table 6-1. Mitigation Monitoring Plan

Tribal Cultural Resources			
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.	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

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